

1 STATE OF TENNESSEE  
2 DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT  
3 BOARD OF BOILER RULES  
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8 QUARTERLY MEETING OF THE  
9 STATE OF TENNESSEE  
10 BOARD OF BOILER RULES

11 December 11, 2019  
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22 -----  
23 CASSANDRA M. BEILING, LCR# 371  
24 STONE & GEORGE COURT REPORTING  
25 2020 Fieldstone Parkway  
Suite 900 - PMB 234  
Franklin, Tennessee 37069  
615.221.1089

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1 APPEARANCES:

2 Brian Morelock, Chairman  
Owner-User Representative

3

4 David W. Baughman  
Owner-User Representative

5 Allied Boiler & Supply, Inc.  
4006 River Lane

6 Milton, Tennessee 37118

7

8 Harold F. Bowers  
Insurance Representative  
Centerville, Tennessee

9

10 Terry Fox  
Boilermaker Representative  
Chattanooga, Tennessee

11

12 Dr. S. Keith Hargrove  
Mechanical Engineer Representative  
Goodlettsville, Tennessee

13

14 Jeffery Henry (not present)  
Boiler Manufacturer

15

16 Sam Chapman, Chief Boiler Inspector

17

18 Chris O'Guin, Boiler Inspector

19

20 Thomas Herrod  
Assistant Commissioner, State of Tennessee

21

22 Daniel Bailey, Esq.  
Legal Counsel, State of Tennessee

23

24 Carlene Bennett  
Board Secretary, State of Tennessee

25

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1 VII. Old Business  
19-08 Parkwest Medical Center

2 19-17 Nokian Tyres U.S. Operations LLC

3 19-21 Proposed changes to Rule  
0800-03-03-.14 Fees

4 VIII. New Business  
19-22 Valero Memphis Refinery

5 19-23 Hearthside Food Solutions LLC

6 19-24 Steris Instrument Management Services

7 19-25 Clover Bottom Developmental Center

8 19-26 Develey Mustard & Condiments Corp.

9 19-27 Tennova Healthcare Harton

10 19-28 TAMKO Building Products, LLC

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12 IX. Rule Case & Interpretations  
BI 19-01 Inquiry 5

13 BI 19-02 Installation requirements for  
CO detectors

14 BI 19-03 Submission of requests to appear  
on meeting agenda

15

16 X. Open Discussion Items  
\*Update on the Boiler Computer System and JO

17 \*Tentative Meeting Dates for 2020  
Wednesday, March 18th

18 Wednesday, June 10th

19 Wednesday, September 16th

20 Wednesday, December 9th

21

22 XI. The next Board of Boiler Rules Meeting is  
scheduled for 9:00 a.m. (CDT), Wednesday,  
March 18, 2019, at the Department of  
Labor & Workforce Development office  
building located at 220 French Landing  
Drive, Nashville, Tennessee.

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24 XII. Adjournment.

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\*\* Reporter's Note: All names are spelled  
phonetically unless otherwise provided to the  
Reporter by the parties.

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17

A G E N D A

18 I. Call Meeting to Order

19 II. Introductions and Announcements

20 III. Adoption of the Agenda

21 IV. Approval of the September 18, 2019 Meeting  
Minutes

22

23 V. Chief Boiler Inspector's Report

24

25 VI. Variance Report

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2 CHAIRMAN MORELOCK: Good morning,

3 everybody. I want to welcome everyone to the

4 December meeting of the Tennessee Board of Boiler

5 Rules. I have 9:00 a.m. and so we'll go ahead and

6 bring this meeting to order.

7 I want to welcome everyone here on

8 this cold December morning. There's refreshments

9 on the back table, so you can go back and get

10 anything you would like back there. There's

11 agendas on the table where you came in, as well as

12 a sign-in sheet. And there will also be one

13 passed around for the board members to sign in.

14 So we have an agenda before us. And

15 what I want to do first is I would like to have a

16 round of introductions and any announcements. And

17 so, Cassandra, I'll start with you.

18 THE REPORTER: Cassandra Beiling,

19 Stone & George Court Reporting.

20 MS. BENNETT: Carlene Bennett,

21 board secretary.

22 MR. O'GUIN: Chris O'Guin,

23 assistant chief.

24 MR. CHAPMAN: Sam Chapman, chief

25 inspector.

<p style="text-align: right;">Page 6</p> <p>1 DR. HARGROVE: Keith Hargrove, 2 board member. 3 CHAIRMAN MORELOCK: Brian Morelock, 4 board member. 5 MR. BAUGHMAN: Dave Baughman, board 6 member. 7 MR. BOWERS: Harold Bowers, board 8 member. 9 MR. FOX: Terry Fox, board member. 10 MR. HERROD: Tom Herrod, assistant 11 commissioner, WRC. 12 MR. BAILEY: Dan Bailey, legal 13 counsel. 14 MR. BOWEN: Bruce Bowen, 15 Steris IMS. 16 MR. TOTH: Marty Toth, ECS 17 Consulting and the Boisco Training Group. 18 MR. NEVILLE: James Neville, 19 President of Neville Engineering. 20 MR. COTTRELL: Phillip Cottrell, 21 Develey Mustard and Condiments. 22 MR. GROSS: Jeremy Gross, Valero 23 Memphis Refinery. 24 MR. TRAUNERO: Matt Traunero, 25 utilities engineer, Nokian Tyres.</p>	<p style="text-align: right;">Page 7</p> <p>1 MS. RHONE: Deborah Rhone, boiler 2 office supervisor. 3 MS. BELL: Deonne Bell, boiler 4 staff. 5 MS. COLLINS: Kyra Collins, boiler 6 staff. 7 MS. BAKER: Tiffany Baker, boiler 8 staff. 9 MS. PRESSON: Jamie Presson, 10 executive admin assistant for WRC. 11 MR. PARHAM: Dave Parham, 12 Travelers. 13 MR. JONES: Kevin Jones, TAMKO 14 Building Products. 15 MR. HUDGINS: Ernie Hudgins, 16 Engineering Services Group. 17 MR. KELLEY: Greg Kelley, Boiler 18 Supply Company. 19 MR. LARGEN: John Largen, Boiler 20 Supply Company. 21 MR. VANSTONE: Blair Vanstone, 22 Middle Tennessee Regional Office, Department of 23 Intellectual Developmental Disabilities, boiler 24 operator/supervisor. 25 MR. ROBINSON: Eugene Robinson,</p>
<p style="text-align: right;">Page 8</p> <p>1 Cincinnati Insurance. 2 MR. DUNLAP: Derrick Dunlap, Jewell 3 Mechanical. 4 CHAIRMAN MORELOCK: All right. 5 Again, thank you all for introducing yourselves. 6 I do have a quick safety item. In the event of an 7 emergency in the building, security personnel 8 would attend to helping us get to a safe place 9 within the building. And if we were to evacuate, 10 we would evacuate on the Rosa Parks side of the 11 building. 12 I would also ask, now that we are in 13 session, if you have a cell phone, please turn 14 that to silent. And if you need to step out and 15 take a phone call, that's perfectly fine, but we 16 want to make sure our presenters and people asking 17 questions are heard clearly. 18 And so when you do come up to make a 19 presentation, introduce yourselves and present 20 your item. 21 Are there any other announcements? 22 (No verbal response.) 23 CHAIRMAN MORELOCK: It's come to my 24 attention that somebody is having a birthday 25 today, Mr. Herrod, so happy birthday.</p>	<p style="text-align: right;">Page 9</p> <p>1 MR. HERROD: Thank you. 2 (Applause.) 3 CHAIRMAN MORELOCK: I hope you have 4 a great birthday. 5 MR. HERROD: Thank you. 6 CHAIRMAN MORELOCK: All right. Our 7 next item on the agenda is adoption of the agenda. 8 And, like I said, they are up on the back table. 9 There are a couple of things that we need to 10 address before we vote on the agenda. 11 So if you will look on page 2, 12 Item 19-23, Hearthside Foods, we will move their 13 item to the March 2020 meeting. They just didn't 14 have everything quite ready for the December 15 meeting, so we will move that to March. 16 Item 19-27 Tennova Healthcare will 17 also be moved to the March 2020 meeting. 18 And if you look, you will see that 19 Item 19-26, we have that same item number for 20 Clover Bottom Development as well as Develey 21 Mustard &amp; Condiments. So we are going to renumber 22 Develey to 19-29. We won't bump you in the 23 agenda. We'll keep you in the same spot, but -- 24 MS. BENNETT: Mr. Morelock? 25 CHAIRMAN MORELOCK: Yes?</p>

<p style="text-align: right;">Page 10</p> <p>1 MS. BENNETT: Would it be possible 2 to make one 25 and one 26? 3 CHAIRMAN MORELOCK: Sure. We can 4 do that. 5 MS. BENNETT: We can make the first 6 one 25, and then -- 7 CHAIRMAN MORELOCK: So make Clover 8 Bottom 25? 9 MS. BENNETT: Yes. 10 CHAIRMAN MORELOCK: Okay. All 11 right. 12 MS. BENNETT: Yes. I think that 13 that's where the error is. 14 CHAIRMAN MORELOCK: Is that -- 15 okay. 16 MS. BENNETT: Yes. 17 CHAIRMAN MORELOCK: All right. So 18 we'll make Clover Bottom 19-25, leave Develley at 19 19-26 and we're good, right? 20 MS. BENNETT: Yes, sir. 21 CHAIRMAN MORELOCK: Okay. Thank 22 you for that. 23 Are there any other changes, 24 additions, deletions to the agenda? 25 MR. TOTH: (Indicating.)</p>	<p style="text-align: right;">Page 11</p> <p>1 CHAIRMAN MORELOCK: Yes? 2 MR. TOTH: I was just curious if 3 the board was going to discuss the interpretation 4 on e-stops for low-pressure boilers at this 5 meeting. 6 CHAIRMAN MORELOCK: Is that not 7 19-01? 8 MR. TOTH: That's set for high- 9 pressure. And I do not see it on the agenda. 10 CHAIRMAN MORELOCK: Is that 19-01? 11 MR. BAILEY: Yes, 19-01. 12 MR. TOTH: 19-01 is for -- I'm just 13 seeing for high pressure. They're actually two 14 separate agenda discussions. If I'm not mistaken, 15 19-01 was a conclusion discussion that was tabled 16 from the September meeting. 17 CHAIRMAN MORELOCK: Yes. 18 MR. TOTH: And so there was also a 19 submittal to discuss low-pressure boilers. That 20 was brought up at the September meeting. 21 MR. BAUGHMAN: And it was actually 22 deleted from that meeting, was it not? 23 MR. TOTH: It was. It was deleted 24 from 19-01 and, subsequently, was resubmitted as a 25 separate interpretation.</p>
<p style="text-align: right;">Page 12</p> <p>1 CHAIRMAN MORELOCK: Okay. So do 2 the board members have a copy of the high-pressure 3 item? 4 MR. TOTH: You do have a -- you 5 have a copy of all -- you have a copy of the high 6 pressure. 7 CHAIRMAN MORELOCK: Right. 8 MR. TOTH: Are you referring to the 9 low-pressure? If you do not, then it will 10 definitely have to be tabled. 11 CHAIRMAN MORELOCK: Hang on. Let 12 me dig down here. So I have a 19-01 Inquiry 5, 13 with Inquiry 5 and a Reply 5. Is that -- 14 MR. TOTH: That would be -- that 15 would be for 19-01. 16 CHAIRMAN MORELOCK: Okay. 17 MR. BAUGHMAN: And low-pressure is 18 not on it. 19 CHAIRMAN MORELOCK: Okay. And then 20 we have 19-02, which is CO. 21 MR. TOTH: Which is CO, yes. 22 CHAIRMAN MORELOCK: And that's all 23 the items that I have. Do the other board members 24 have any other items? 25 MR. TOTH: Do we have anything on</p>	<p style="text-align: right;">Page 13</p> <p>1 the -- well, 19-03? 2 CHAIRMAN MORELOCK: That's for 3 submitting items to the board. 4 MR. TOTH: Variance items? 5 CHAIRMAN MORELOCK: I don't know 6 that we have a hard copy. 7 MR. BAUGHMAN: Here is an email 8 where we request the low-pressure, November 21st, 9 to be added -- 10 CHAIRMAN MORELOCK: Okay. So 11 that's low-pressure. 12 MR. BAUGHMAN: -- to be added to 13 the discussion of high-pressure. 14 CHAIRMAN MORELOCK: Mr. Toth, I 15 don't know that I have -- 16 MR. TOTH: Okay. 17 CHAIRMAN MORELOCK: Does the board 18 have a handout for... 19 MR. TOTH: If not, Mr. Chairman, I 20 recommend that you probably table it until the 21 March meeting, only because -- to give the board 22 members an opportunity to research it. 23 CHAIRMAN MORELOCK: Okay. Because 24 I don't know that we have a handout for everybody 25 to review. Is that okay with you? No hardships?</p>

<p style="text-align: right;">Page 14</p> <p>1 MR. TOTH: No. That's absolutely 2 fine. We do show 1903 on the agenda, but it 3 appears that that was not -- that was not 4 submitted to the board members either. 5 CHAIRMAN MORELOCK: I think the 6 current -- let's see. 7 MR. BAUGHMAN: What is 19-03? 8 CHAIRMAN MORELOCK: 19-03 doesn't 9 show on the agenda that's on the back table. 10 MR. TOTH: On the last page? 11 CHAIRMAN MORELOCK: Is it on that 12 one? 13 MR. BAUGHMAN: The one that was 14 emailed to us did not have it. 15 CHAIRMAN MORELOCK: Yeah. We don't 16 have it on our agenda. 17 MR. TOTH: Okay. We'll just have 18 to table that. I'll make sure that those are -- 19 CHAIRMAN MORELOCK: Okay. I'll 20 make a note of that. 21 MR. TOTH: Great. Thank you. 22 MR. BAUGHMAN: What is 19-03? 23 CHAIRMAN MORELOCK: 19-03 is an 24 interpretation on submitting items to the board, 25 like board cases, board interpretations.</p>	<p style="text-align: right;">Page 15</p> <p>1 MR. TOTH: Okay. That's a little 2 different than the variance interpretations, then. 3 That's my fault. 4 MS. BENNETT: The one about the 5 variance manuals, I think it's under Discussion 6 Items. 7 CHAIRMAN MORELOCK: It's under 8 what? 9 MS. BENNETT: Discussion Items. 10 CHAIRMAN MORELOCK: Oh, okay. So 11 we didn't have an official... 12 DR. HARGROVE: Not submission but a 13 discussion. 14 CHAIRMAN MORELOCK: Yes. So, 15 Mr. Toth, it is shown as a discussion item. My 16 apologies. But it doesn't have an item number 17 tied to it. 18 MR. TOTH: Okay. But it is the -- 19 you do have the documentation for the 20 interpretation request? 21 CHAIRMAN MORELOCK: I do not. 22 MR. TOTH: Okay. 23 CHAIRMAN MORELOCK: I do not. We 24 can talk about it, but we'll just need to resubmit 25 your item for March to vote on it.</p>
<p style="text-align: right;">Page 16</p> <p>1 MR. TOTH: Okay. 2 CHAIRMAN MORELOCK: All right. Any 3 other items to clarify or correct the agenda? 4 (No verbal response.) 5 CHAIRMAN MORELOCK: Okay. Hearing 6 none, do I have a motion to approve? 7 MR. BAUGHMAN: Motion to approve. 8 CHAIRMAN MORELOCK: Second? 9 MR. BOWERS: Second. 10 CHAIRMAN MORELOCK: Any additional 11 discussion? 12 (No verbal response.) 13 CHAIRMAN MORELOCK: I'll call the 14 question. All in favor say aye. 15 (Affirmative response.) 16 CHAIRMAN MORELOCK: Opposed? 17 (No verbal response.) 18 CHAIRMAN MORELOCK: Abstentions, 19 not voting? 20 (No verbal response.) 21 CHAIRMAN MORELOCK: Okay. We have 22 an agenda. 23 That will take us to Item 4, approval 24 of the minutes from the last meeting, which was 25 September 18th, 2019. Are there any corrections</p>	<p style="text-align: right;">Page 17</p> <p>1 to the September minutes? I hope you had a chance 2 to read them. 3 (No verbal response.) 4 CHAIRMAN MORELOCK: Okay. Hearing 5 none, all those in favor of the September 18, 2019 6 minutes say "Aye." 7 (Affirmative response.) 8 CHAIRMAN MORELOCK: Opposed? 9 (No verbal response.) 10 CHAIRMAN MORELOCK: Abstentions, 11 not voting? 12 (No verbal response.) 13 CHAIRMAN MORELOCK: The September 14 meeting minutes are approved. 15 That will take us to Item 5, which is 16 the Chief Boiler Inspector's Report. And I'll 17 hand that over to Chief Inspector Sam Chapman. 18 MR. CHAPMAN: Thanks, Chairman. 19 The number of inspections, state 20 inspectors was 3,530; insurance agencies, 4,962, 21 giving us a total of 8,492. 22 Deputy inspectors inspected 892 new 23 vessels. 24 Total number of delinquents out of 25 71,793 active vessels. State inspectors was</p>

<p style="text-align: right;">Page 18</p> <p>1 1,205 -- that's on the delinquent -- insurance  2 inspectors is 367, giving us a total of 1,572  3 vessels.  4           Number of code violations, violations  5 found was 51; uncorrected violations is a total of  6 23.  7           The report data period is July to  8 September of 2019. Variance inspections will be  9 performed by Chris O'Guin, Assistant Chief  10 Inspector. We have a new inspector named Gregory  11 Strickland, which is going to be in the Nashville  12 area. And we have a new inspector that took the  13 exam December the 4th. He passed the exam, so we  14 do now have a new inspector for the Memphis area.  15           That is the chief's report.  16           CHAIRMAN MORELOCK: Very good.  17 That's good news. Any questions, comments?  18           (No verbal response.)  19           CHAIRMAN MORELOCK: Okay. That  20 will take us to Item 6, which is the variance  21 report. And I'll hand that over to Assistant  22 Chief Inspector Chris O'Guin.  23           MR. O'GUIN: Thank you, Chairman.  24           As of today, we've got 132 known  25 variances; 8 requiring a follow-up inspection; 69</p>	<p style="text-align: right;">Page 19</p> <p>1 are active; 15 require reinspection; and 40 no  2 longer require it. They are dormant.  3           This quarter, we have completed  4 14 variance audit with 9 approved, and 5 failed.  5           Do you want me to name the ones that  6 failed the inspection?  7           CHAIRMAN MORELOCK: Yes.  8           MR. O'GUIN: Starting off, West  9 Tennessee Healthcare in Dyersburg failed due to  10 lack of training; West Tennessee Healthcare in  11 Jackson failed, lack of training; and Royal Canine  12 in Lebanon failed, lack of training and the e-stop  13 at the remote station did not work; and Centennial  14 in Nashville failed due to lack of training; and  15 St. Thomas West in Nashville failed due to lack of  16 training.  17           CHAIRMAN MORELOCK: Any questions?  18           (No verbal response.)  19           CHAIRMAN MORELOCK: The e-stop,  20 have they corrected that?  21           MR. O'GUIN: The one at the boiler  22 room worked properly.  23           CHAIRMAN MORELOCK: Okay.  24           MR. O'GUIN: But the one at the  25 remote station did not.</p>
<p style="text-align: right;">Page 20</p> <p>1           CHAIRMAN MORELOCK: Okay.  2           MR. O'GUIN: So they're still on a  3 20-minute rule, and they're supposed to be getting  4 it correct. And then once their training is up to  5 date and they're good, they'll call for  6 reinspection.  7           CHAIRMAN MORELOCK: Okay.  8           MR. BAUGHMAN: I would be  9 interested to know, just as a follow-up at some  10 point in time -- I don't know how we'd do it  11 either, through yourself or input from them --  12 what, on that panel with the e-stop was actually  13 the issue, if it's the e-stop itself, mechanical  14 wise, I'm just interested in what the failure mode  15 was.  16           MR. CHAPMAN: Good question.  17           MR. O'GUIN: Because they had the  18 switch off, reenergized the boiler, and the boiler  19 came up, and the switch in the remote station was  20 still in the off position.  21           DR. HARGROVE: Question: Is it  22 your responsibility or the board or the assistant  23 chief to make recommendations regarding the lack  24 of training for the observations that were made?  25           MR. CHAPMAN: What we do is when</p>	<p style="text-align: right;">Page 21</p> <p>1 there's lack of training, we tell them that they  2 need to get trained on it. You know, if the  3 manual says -- do as the manual says and go from  4 there. So they're not even following the manual  5 on it, you know.  6           Some of them are just, okay, Jim  7 always goes to the boiler. You cannot assume  8 that. So that's the lack of training that most of  9 them do. It's follow your manual. If your manual  10 says step 1, 2, 3, go right down the manual.  11           DR. HARGROVE: Yes, sir.  12           MR. CHAPMAN: And they're not doing  13 that. They might go 1 and skip down to 5.  14           MR. O'GUIN: All of these -- just  15 for a better understanding for you-all -- all the  16 five that failed were due to remote station  17 training. All the boiler operators are on the  18 same page with the manual. But the remote  19 station, they will either be too busy with other  20 work or they won't follow their procedure in the  21 manual and they'll call a boiler alarm over a  22 two-way radio and that's it. And there's no  23 follow-up, et cetera. So you've got a boiler down  24 there in alarm, so...  25           MR. CHAPMAN: And there's no</p>

<p style="text-align: right;">Page 22</p> <p>1 documentation of that either, right?</p> <p>2 CHAIRMAN MORELOCK: Well, the</p> <p>3 documentation is the implementation of their</p> <p>4 manual.</p> <p>5 MR. CHAPMAN: Yes.</p> <p>6 MR. O'GUIN: Yes.</p> <p>7 CHAIRMAN MORELOCK: And it's a good</p> <p>8 finding, from the standpoint of this is the two</p> <p>9 pieces of a boiler attendant variance. It comes</p> <p>10 to the board to look at all the aspects of the</p> <p>11 manual and make sure all the components are in</p> <p>12 place. And then the field visit by the State of</p> <p>13 Tennessee, are you doing what's written in your</p> <p>14 manual. And that is so critical.</p> <p>15 MR. O'GUIN: Yes, sir.</p> <p>16 CHAIRMAN MORELOCK: And when you</p> <p>17 reported that, I was thinking of Dr. Canonico.</p> <p>18 That was always his big concern, was, well, what</p> <p>19 if the security guard is busy, what if he's in a</p> <p>20 fight somewhere, you know. And so this is proof</p> <p>21 that the system is working. So that's actually a</p> <p>22 very good report.</p> <p>23 And so it's back on the owner now,</p> <p>24 the operators, to do what their manual says.</p> <p>25 MR. O'GUIN: And those five that</p>	<p style="text-align: right;">Page 23</p> <p>1 failed, they're on the 20-minute rule until</p> <p>2 further inspection.</p> <p>3 CHAIRMAN MORELOCK: Yes.</p> <p>4 MR. BAUGHMAN: The one thing that</p> <p>5 comes to mind with that e-stop that failed on the</p> <p>6 remote panel, that then goes to let you know that</p> <p>7 the procedure in the manual is not being followed</p> <p>8 also. Because if it was, that failure of the</p> <p>9 e-stop -- unless it just failed at that particular</p> <p>10 point in time, coincidentally, it would have been</p> <p>11 picked up during their normal variance procedure.</p> <p>12 MR. CHAPMAN: Yes.</p> <p>13 MR. BAUGHMAN: Okay. Interesting.</p> <p>14 CHAIRMAN MORELOCK: Very good.</p> <p>15 MR. BOWERS: You know, personally,</p> <p>16 I think it's very good that you found that. I</p> <p>17 mean, it proves that the system is working. You</p> <p>18 know, we're very leery about these -- a lot of us</p> <p>19 are -- about these variances anyhow. So this is</p> <p>20 proof the system is working. So what you'll do,</p> <p>21 you'll do a follow-up inspection. You'll go</p> <p>22 through the whole system again, correct?</p> <p>23 MR. CHAPMAN: That's correct.</p> <p>24 MR. BOWERS: And see if they pass.</p> <p>25 Then three years from now, you'll go back to do it</p>
<p style="text-align: right;">Page 24</p> <p>1 again. They have to -- when they renew, do they</p> <p>2 have to go through a test, when they review?</p> <p>3 MR. O'GUIN: Yes, sir.</p> <p>4 MR. BOWERS: So they'll do a</p> <p>5 follow-up visit three years -- after they pass it</p> <p>6 three years from now when they renew it, they</p> <p>7 still have to go through a physical test.</p> <p>8 MR. CHAPMAN: Yes.</p> <p>9 MR. BOWERS: That's very good. So</p> <p>10 we're making sure the system is working.</p> <p>11 CHAIRMAN MORELOCK: So three years</p> <p>12 from now, if they make no technical change to the</p> <p>13 manual, it's all on the Boiler Unit --</p> <p>14 MR. CHAPMAN: Yes.</p> <p>15 CHAIRMAN MORELOCK: -- for the</p> <p>16 renewal.</p> <p>17 MR. BOWERS: Yes.</p> <p>18 CHAIRMAN MORELOCK: If there was a</p> <p>19 technical change, then it would come back to the</p> <p>20 board.</p> <p>21 MR. BOWERS: But they would check</p> <p>22 it. They're physically checking it to make sure</p> <p>23 that three years from now these people haven't got</p> <p>24 lax. And they change personnel, and you're</p> <p>25 actually doing a physical test three years from</p>	<p style="text-align: right;">Page 25</p> <p>1 now, and all of a sudden, three years from now,</p> <p>2 they fail the test again. And I was, like, you</p> <p>3 haven't retrained your new people to what you did</p> <p>4 three years ago. So we're constantly making sure</p> <p>5 they they're compliant to the rules.</p> <p>6 MR. O'GUIN: Yes, sir.</p> <p>7 MR. BAUGHMAN: My concern with the</p> <p>8 three years gets back to the hardware issue. If</p> <p>9 we had a failure of the hardware and they're also</p> <p>10 not, at that particular time, keeping up with the</p> <p>11 manual, we've got three years' worth of time, or</p> <p>12 whatever period of time in between inspections.</p> <p>13 So we're not inspecting to the variance except</p> <p>14 once every three years; is that correct?</p> <p>15 MR. CHAPMAN: That is correct.</p> <p>16 MR. BAUGHMAN: Interesting.</p> <p>17 CHAIRMAN MORELOCK: Well, but the</p> <p>18 boilers themselves go down annually, correct?</p> <p>19 MR. CHAPMAN: That's correct.</p> <p>20 CHAIRMAN MORELOCK: So you're</p> <p>21 inspecting annually, the equipment.</p> <p>22 MR. BAUGHMAN: Yes. Unless you're</p> <p>23 on an extension of a variance with the inspection.</p> <p>24 CHAIRMAN MORELOCK: Well, that's</p> <p>25 true.</p>

<p style="text-align: right;">Page 26</p> <p>1 MR. BAUGHMAN: So there's variables 2 in that.</p> <p>3 MR. CHAPMAN: Yes, it is.</p> <p>4 MR. BOWERS: But actually, as an 5 inspector -- as a matter of fact, I was at that 6 location, one of them that failed, and they did 7 the test that day. They thought I was the state 8 inspector inspecting it.</p> <p>9 I said, "Well, I'm going to do an 10 operational inspection."</p> <p>11 They said, "Well, do it." And they 12 said, "You're not from the State, are you?"</p> <p>13 And I said, "No. So you have to go 14 through this process again when the state 15 inspector comes out, to get it approved."</p> <p>16 Apparently, they -- this was three 17 weeks ago. So has it failed again within three 18 years? Did they reinspect in the last three 19 weeks?</p> <p>20 MR. O'GUIN: I'm not sure who 21 you're talking about.</p> <p>22 MR. BOWERS: This is the St. Thomas 23 location, St. Thomas West. You said they failed.</p> <p>24 MR. O'GUIN: We have not 25 reinspected that location.</p>	<p style="text-align: right;">Page 27</p> <p>1 MR. BOWERS: Okay. So the regular 2 inspectors are checking this. No, we don't get 3 into the variances near as much as they get into 4 the variance, but we do do an operational 5 inspection on a high-pressure boiler.</p> <p>6 MR. TOTH: (Indicating.)</p> <p>7 CHAIRMAN MORELOCK: Yes?</p> <p>8 MR. TOTH: Marty Toth, ECS. 9 Question: When they do fail, it's the user's 10 responsibility to contact you when they're ready 11 for a reinspection, correct?</p> <p>12 MR. CHAPMAN: That's correct.</p> <p>13 MR. TOTH: Okay. Thank you.</p> <p>14 CHAIRMAN MORELOCK: Any other 15 questions or comments? 16 (No verbal response.)</p> <p>17 CHAIRMAN MORELOCK: All right. 18 Good conversation.</p> <p>19 MR. ROBINSON: Chairman? 20 CHAIRMAN MORELOCK: Yes. 21 MR. BAILEY: State your name, 22 please.</p> <p>23 MR. ROBINSON: Eugene Robinson, 24 Cincinnati Insurance. 25 From a quality standpoint, at some</p>
<p style="text-align: right;">Page 28</p> <p>1 point, if you can continue to see a trend of the 2 training issues reoccurring, you may want to put a 3 corrective action in place where you demand the 4 user to submit to you in writing their corrective 5 action and what they intend to do. And then you 6 have the right to deny or accept that corrective 7 action to eliminate the problem.</p> <p>8 CHAIRMAN MORELOCK: Okay. Any 9 other questions or comments? 10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: Okay. Moving 12 on to Item Number 7, which is Old Business. And 13 our first item is 19-8, Parkwest Medical Center, 14 acceptance of revisions to a newly issued 15 variance.</p> <p>16 And so if you'll come forward, 17 introduce yourselves, and present the item.</p> <p>18 And are there any board conflicts for 19 this item? 20 (No verbal response.)</p> <p>21 CHAIRMAN MORELOCK: All right. 22 MR. TOTH: Good morning again. 23 Marty Toth, ECS Consulting, here to -- I am the 24 representative for Parkwest Medical. As you 25 alluded to, Mr. Chairman, we submitted this, the</p>	<p style="text-align: right;">Page 29</p> <p>1 manual, initially, on the four existing boilers 2 that are located at Parkwest with the 3 understanding that we were going through the 4 process of adding a fifth boiler and, also, just 5 for the board's understanding, a new deaerator 6 that was much needed. Even though that is not 7 technically part of the variance, it will be 8 listed.</p> <p>9 So as you mentioned, this is, I would 10 say, simply, a revision to the existing manual. 11 There are no process changes to the manual, same 12 individuals are involved in the manual, in the 13 remote variance itself. All we've done is added 14 in the fifth boiler. If you look at the 15 illustration showing the remote panel from the old 16 manual, it was actually shaded in showing future 17 expansion. Now that is gone. There were some 18 revision editorials once I sat with the client and 19 we reviewed the manual. At this time, I'll be 20 happy to mention those to you.</p> <p>21 If you'll notice, page iii will list all 22 of the changes that are added into the manual 23 since the presentation in March.</p> <p>24 On page 15, which is in the appendices, 25 the information -- there was some information that</p>

<p style="text-align: right;">Page 30</p> <p>1 was not available at time of printing. I do have 2 that information now if you would like to make 3 note.</p> <p>4 CHAIRMAN MORELOCK: Please. 5 MR. TOTH: Tennessee Number T125793 6 was issued to Boiler Number 5. 7 MR. BAUGHMAN: What was that number 8 again? I'm sorry. 9 MR. TOTH: I'm sorry. T125793. 10 MR. BAUGHMAN: Thank you. 11 MR. TOTH: The boiler also has a 12 maximum fuel input of 12,247,00 BTUs with an 13 output of 10,350, which equates to that 14 300 horsepower. You'll also notice that there is 15 a photograph that illustrates Boiler Number 5, a 16 nice-looking boiler there. 17 The DA information on the next page, 18 I will give you that information as well. So that 19 National Board number is 18326, with a Tennessee 20 number of T125794. Cleaver-Brooks boiler is the 21 manufacturer with a model number of 22 SD-70-1400/1800, and the serial number of 23 O15296-1-1. And it was built in 2019. 24 Again, this is just in addition to 25 it. I was very happy to see the client take the</p>	<p style="text-align: right;">Page 31</p> <p>1 suggestions that I gave them in regards to adding 2 additional local e-stops to their boiler room. As 3 you can see from the site plan itself, if you'll 4 take a look, initially, the only local e-stops -- 5 I'm sorry, that's on page 13, if you would like to 6 look. Initially, the only local e-stops that they 7 had were located exiting the boiler room to the 8 outside, near Boiler Number 5. Upon my request, 9 they also included e-stops above Boiler Number 1 10 and Number 2, an e-stop panel there. And, also, 11 an e-stop panel at the exit going downstairs, that 12 would also exit at a lower level of the building 13 itself.</p> <p>14 I would be welcome to any questions 15 you might have concerning this addition to Boiler 16 Number 5, and any other questions.</p> <p>17 CHAIRMAN MORELOCK: Okay. Do I 18 have a motion to discuss? 19 MR. BAUGHMAN: So moved. 20 CHAIRMAN MORELOCK: Second? 21 MR. BOWERS: Second. 22 CHAIRMAN MORELOCK: Any questions 23 or comments? 24 DR. HARGROVE: Quick question. 25 What's the total distance -- I'm trying to look</p>
<p style="text-align: right;">Page 32</p> <p>1 for some dimensions on the site plan. 2 MR. TOTH: Okay. Approximately 3 200 feet. If you'll see from the remote 4 station... 5 DR. HARGROVE: Boiler 2 in front 6 of -- 7 MR. TOTH: Are you talking from the 8 remote station to the boiler room or between the 9 boilers? 10 DR. HARGROVE: First floor. 11 MR. TOTH: Okay. First floor. 12 DR. HARGROVE: What are the 13 dimensions, let's just say, from the e-stop for 14 Boiler 1 and 2 to the e-stop of Boiler 3, 4, and 15 5. 16 MR. TOTH: Okay. Just to be very 17 clear, Dr. Hargrove, the e-stop that's above 18 Boiler Number 1 and Number 2 also includes e-stops 19 for 3, 4, and 5 as well. 20 DR. HARGROVE: Okay. 21 MR. TOTH: So what we did was we 22 included a fifth e-stop over by the exiting behind 23 Boiler Number 5 to include Boiler Number 5 in that 24 bundle. Then we also added a whole new panel for 25 above Boiler Number 1 and 2, for all five boilers,</p>	<p style="text-align: right;">Page 33</p> <p>1 and a remote panel at the bottom of the steps, 2 going down to the lower level. 3 Just so you can get a visual, the 4 back road behind the hospital is actually is at a 5 grade, going down, so they both exit out to that 6 same road but just on different levels. And so 7 those stairs, at the bottom of those stairs, is 8 another e-stop panel with all five boilers. 9 So if you were to want to know the 10 distance between that e-stop and that rear wall, I 11 would say that is approximately 50 to 60 feet. 12 DR. HARGROVE: Okay. 13 MR. TOTH: It's all located in the 14 same room. The illustration may appear that there 15 is a wall there, but it's actually an opening. 16 That's just an overhead arched opening. 17 DR. HARGROVE: All right. Thank 18 you, sir. 19 MR. TOTH: You're welcome. 20 MR. BAUGHMAN: Mr. Toth? 21 MR. TOTH: Yes? 22 MR. BAUGHMAN: So e-stops are 23 required at each point of pedestrian egress. And 24 being that Boiler Number 1 and Number 2 would 25 require two means of exit out the boiler room for</p>

<p style="text-align: right;">Page 34</p> <p>1 the size of the boilers, I see the e-stop at one  2 of those locations, but being that it's a  3 requirement to have two means of exit out the  4 boiler room, the only other means of exit out of  5 boiler room that houses Number 1 and 2 looks to be  6 over in the mechanical room at that exit; is that  7 correct?</p> <p>8 MR. TOTH: No, it's not.  9 MR. BAUGHMAN: Okay.  10 MR. TOTH: As I mentioned to  11 Dr. Hargrove, it appears in the illustration that  12 that is a wall. But if you'll notice, that is a  13 one-line versus a two-line illustration. For a  14 solid wall, you would see a double line. That is  15 a pass-through.  16 MR. BAUGHMAN: Okay. Yeah, just  17 hard to tell. But thank you for that explanation.  18 MR. BOWERS: I was wondering the  19 same thing.  20 MR. TOTH: Yes. I would say to  21 take that illustration from their drawings and  22 remove that line probably would be a good idea.  23 Just for architectural sake, the double line  24 represents a wall, be it a load-bearing or  25 pedestrian. A single line represents a</p>	<p style="text-align: right;">Page 35</p> <p>1 pass-through.  2 MR. BAUGHMAN: So being a  3 pass-through, what does that exactly mean, just  4 to --  5 MR. TOTH: It's just open.  6 MR. BAUGHMAN: Just open?  7 MR. TOTH: It's open. In the  8 middle, if you look to the left of where it reads  9 boiler room, that's a column. And it's just a  10 simple pass-through step-up that goes into that  11 space.  12 MR. BAUGHMAN: So actually, where  13 Boiler Number 1 and Number 2 is, there's a  14 pass-through there with a column and a door there  15 also?  16 MR. TOTH: No.  17 MR. BAUGHMAN: Okay. So there is  18 no --  19 MR. TOTH: No. Just a  20 pass-through.  21 MR. BAUGHMAN: Just a pass-through.  22 Okay.  23 MR. TOTH: If there were a door,  24 there would be a door illustration, as you see, a  25 swing-in or a swing-out, and there's not.</p>
<p style="text-align: right;">Page 36</p> <p>1 MR. BAUGHMAN: Very good. And that  2 pass-through opens up into the -- and I'm sorry.  3 I just don't have my stronger glasses on.  4 Actually, I do have some in my briefcase. But  5 that's just an open area right there into the --  6 MR. TOTH: It's just one large  7 boiler room.  8 MR. BAUGHMAN: One large boiler  9 room. I'm just kind of curious where we're  10 pulling our combustion air from, just from a  11 mechanical standpoint.  12 MR. TOTH: You're pulling it from a  13 number of different locations that were inspected  14 and passed by the inspector.  15 MR. BAUGHMAN: Okay.  16 MR. TOTH: So yeah, there are a  17 number of locations where we are pulling  18 combustion air from.  19 MR. BAUGHMAN: Interesting. Thank  20 you.  21 MR. BOWERS: A question on the  22 e-stops.  23 MR. TOTH: Sure.  24 MR. BOWERS: You've got two  25 e-stops. Either e-stop will shut down all five</p>	<p style="text-align: right;">Page 37</p> <p>1 boilers, correct?  2 MR. TOTH: No. You have individual  3 e-stops for each boiler. There's no requirement  4 set forth by the boiler at this time that requires  5 all boilers to be shut off by one e-stop.  6 MR. BOWERS: Now, according to the  7 NBIC, but I thought we had talked about --  8 MR. TOTH: According to the NBIC  9 what?  10 MR. BOWERS: You could have  11 multiple e-stops.  12 CHAIRMAN MORELOCK: Yes.  13 MR. BOWERS: But I thought that  14 somewhere in the state that we had talked about --  15 or we have discussed it.  16 MR. BAUGHMAN: We're going to.  17 CHAIRMAN MORELOCK: We've discussed  18 it.  19 MR. BOWERS: Okay.  20 MR. TOTH: Again, this is a -- this  21 was a choice that was made by Parkwest for that  22 purpose, that they felt that for their operations,  23 it was safer to be able to test those e-stops  24 individually without disturbing all their boiler  25 operations. And that does follow the requirements</p>

<p style="text-align: right;">Page 38</p> <p>1 at this time for the NBIC in the state of 2 Tennessee.</p> <p>3 CHAIRMAN MORELOCK: Other 4 questions? Comments?</p> <p>5 MR. BAUGHMAN: Yes.</p> <p>6 CHAIRMAN MORELOCK: Okay.</p> <p>7 MR. BAUGHMAN: Under Appendix J, 8 page 41, Item 36 (b), "Does the Manual include a 9 test of: (a), (b), (c), (d), but in particular, 10 (b), water column, and it identifies for that -- 11 is that Section 4, Part 3, page 10?</p> <p>12 MR. TOTH: That's what it reads.</p> <p>13 MR. BAUGHMAN: Okay. Could you 14 identify where in Section 4, Part 3, page 10 15 that's addressed?</p> <p>16 MR. TOTH: What we are referring 17 to, when we talk -- do we include all of the 18 system requirements? That is in normal 19 operations. Now, if you are -- when you talk 20 about normal duties, normal operations, we're also 21 referring to how we're going to test the system 22 when we test the communications. How we do that 23 is by performing either a test of the boiler 24 limits or by manual means at the control. So that 25 is where we are actually testing those limits or</p>	<p style="text-align: right;">Page 39</p> <p>1 the water column.</p> <p>2 So when we say -- if we want to say 3 are we testing the boiler water column, is that a 4 part or requirement to spell that out in the code 5 book -- or in the manual? I don't see where 6 that's necessarily a requirement to actually spell 7 out what we are going to test. We're saying we 8 are going to test the limits.</p> <p>9 The operations of that boiler on a 10 daily basis, per their operation logs, calls for 11 them to do a low-water test of each boiler and 12 operation.</p> <p>13 To spell that out in our code, we are 14 spelling it out by saying we are testing those 15 limits.</p> <p>16 MR. BAUGHMAN: Okay. Well, I'll 17 come back to that. In our manual, in specific, 18 does the manual include a test of (a), (b), (c), 19 and (d), and (b) being the water column --</p> <p>20 MR. TOTH: I would be more than 21 happy to change that to "N/A" if you would like.</p> <p>22 MR. BAUGHMAN: Sure. Because you 23 do put a reference to it in the manual, going back 24 to that -- Section 4, page 10, Part 3 -- but 25 there's nothing that's there. So we're saying</p>
<p style="text-align: right;">Page 40</p> <p>1 it's not -- so what I'm saying is it's part of the 2 manual and you're saying...</p> <p>3 MR. TOTH: I'm saying it is because 4 I'm using the terminology "testing limits."</p> <p>5 MR. BAUGHMAN: Okay.</p> <p>6 MR. TOTH: Which includes above and 7 beyond testing the water column.</p> <p>8 MR. BAUGHMAN: Okay. Right. But 9 in our manual, of course, it doesn't say does the 10 manual include a test of the limits. It's 11 specific to boiler water column. So that's my 12 point in there, as far as to the manual.</p> <p>13 MR. TOTH: And so my explanation is 14 not satisfactory. Would you like me to change 15 that?</p> <p>16 MR. BAUGHMAN: I'll leave that up 17 for discussion of others, but...</p> <p>18 MR. TOTH: I'll be more than happy 19 to put that in there if "testing the limits" is 20 not satisfactory; whereas, testing the limits 21 includes water columns, gas streams, things of 22 that nature.</p> <p>23 CHAIRMAN MORELOCK: If I can 24 interject, what we do is we tell owner-users that 25 they need to test their boiler, but we don't</p>	<p style="text-align: right;">Page 41</p> <p>1 necessarily tell them how to do it. Because then 2 we shift liability to ourselves if we tell them 3 how to do it. We just tell them they need to test 4 their boilers. Just like the ASME code will tell 5 you what you need to do, but it's not going to 6 tell you how to do that.</p> <p>7 MR. TOTH: Mr. Chairman, if I may 8 interject. I agree with what Mr. Baughman is 9 saying, is that the checklist does ask if we 10 include a test of the boiler water column.</p> <p>11 CHAIRMAN MORELOCK: It does.</p> <p>12 MR. TOTH: If the board feels more 13 comfortable for the manual to spell out water 14 column, we can say limits and water column, if 15 that makes us feel like we're answering the 16 question.</p> <p>17 The question, to me, is being 18 answered in "testing limits." But if the board 19 feels like we need to add that because it's one of 20 the check-offs, I'll be more than happy to.</p> <p>21 DR. HARGROVE: Mr. Chairman, the 22 point made by Mr. Toth is relevant; however, it 23 may complicate matters when Item 36(d) says 24 "Other." We may have to list what those items 25 are.</p>

<p style="text-align: right;">Page 42</p> <p>1 CHAIRMAN MORELOCK: Exactly.</p> <p>2 MR. TOTH: I'm sorry, 36(d)?</p> <p>3 CHAIRMAN MORELOCK: And you're</p> <p>4 going to -- I mean, our previous manuals have not</p> <p>5 required that level of detail.</p> <p>6 MR. TOTH: All right. But again --</p> <p>7 CHAIRMAN MORELOCK: So it'll be a</p> <p>8 retroactive change for everybody.</p> <p>9 MR. TOTH: Right. The one thing</p> <p>10 that I would like for us all to recognize is just</p> <p>11 as you had mentioned, Mr. Chairman, is that the</p> <p>12 testing is the responsibility of the owner-user</p> <p>13 and how they test.</p> <p>14 NFPA 85 CSD-1 are going to require</p> <p>15 tests. They're going to require that the</p> <p>16 owner-user provide a checklist of those tests that</p> <p>17 are being performed. What this manual and what</p> <p>18 these manuals are going to look for is the</p> <p>19 communication. What is that communication? That</p> <p>20 hardwired communication that's going from that</p> <p>21 particular boiler to the remote station and how</p> <p>22 that's performed. It does not stipulate nor does</p> <p>23 it read anywhere that you have to do a limit check</p> <p>24 to test that communication. Is it best practice?</p> <p>25 Absolutely. Absolutely, to perform those tests.</p>	<p style="text-align: right;">Page 43</p> <p>1 I can assure you my clients are not only</p> <p>2 documentation of those particular tasks; they're</p> <p>3 also trained, specifically, on those tests and</p> <p>4 those requirements.</p> <p>5 But, again, I go back to whatever</p> <p>6 this board would like to see in this manual, I'll</p> <p>7 be more than happy to spell it out. That does not</p> <p>8 necessarily mean that every one of those checks</p> <p>9 are going to be made at every opportunity at the</p> <p>10 beginning of every shift.</p> <p>11 CHAIRMAN MORELOCK: So in the</p> <p>12 future manuals, as we get to looking at some</p> <p>13 others, you do specifically address water column.</p> <p>14 MR. TOTH: Oh, I do.</p> <p>15 MR. BAUGHMAN: Yeah. And so</p> <p>16 it's -- but if we're going to change --</p> <p>17 MR. TOTH: Well, I --</p> <p>18 MR. BAILEY: One at a time.</p> <p>19 MR. BAUGHMAN: So --</p> <p>20 MR. TOTH: If I may interject.</p> <p>21 MR. BAUGHMAN: Interject.</p> <p>22 MR. TOTH: I specifically addressed</p> <p>23 low-water cutoff checks. I do not specifically</p> <p>24 address water columns.</p> <p>25 Sorry about that.</p>
<p style="text-align: right;">Page 44</p> <p>1 MR. BAILEY: No problem.</p> <p>2 MR. BAUGHMAN: And so to further</p> <p>3 that, we go through tests of the limits, but in</p> <p>4 Section 4, page 10, Item (b), -- let's see.</p> <p>5 Section 4, page 10, Item (b), the question I had</p> <p>6 was there's an alarm test feature -- in other</p> <p>7 words, on some of these boilers, Cleaver-Brooks</p> <p>8 and others, they don't actually test the limit.</p> <p>9 It's a shunt that checks the alarm. So all it's</p> <p>10 doing is it puts 120 volts over on the alarm</p> <p>11 circuit, sends the alarm out, and it goes to the</p> <p>12 remote panel and so forth on it. But it's not</p> <p>13 actually testing the limit. In other words, it's</p> <p>14 not shutting the boiler down; it's just testing</p> <p>15 the alarm.</p> <p>16 And so from a boiler operator</p> <p>17 standpoint, I don't feel that that's a proper test</p> <p>18 of the limits. And under the training, we would</p> <p>19 want to make sure that through the proper training</p> <p>20 and through CSD-1's requirements and on through</p> <p>21 the inspector's checks, that the limits are</p> <p>22 actually checked for their functionality and their</p> <p>23 alarm capabilities.</p> <p>24 MR. TOTH: If I --</p> <p>25 MR. BOWERS: The problem I have --</p>	<p style="text-align: right;">Page 45</p> <p>1 MR. TOTH: Can I respond to that?</p> <p>2 MR. BOWERS: Well, the problem I</p> <p>3 have, we don't want to -- as a board, we don't</p> <p>4 want to overreach, and we don't want to tell</p> <p>5 people how to do their jobs. We have the NBIC.</p> <p>6 We have the ASME. We've got all these codes to</p> <p>7 tell them how to do stuff. As a board, we don't</p> <p>8 want to overreach and tell people what to do</p> <p>9 day-to-day.</p> <p>10 MR. TOTH: If I may respond to</p> <p>11 that. Absolutely, Mr. Baughman. Here's the thing</p> <p>12 to recognize. The actual controls that we have on</p> <p>13 these boilers are Honeywell 7800 burner controls.</p> <p>14 Those particular burner controls do have the</p> <p>15 opportunity for us to press and hold the reset</p> <p>16 button for a three-second period. That will cycle</p> <p>17 the boiler down. That will take that alarm and</p> <p>18 send that signal to the remote station. Again,</p> <p>19 that's what we're achieving through the</p> <p>20 communications of the alarm. That is the test</p> <p>21 we're looking for.</p> <p>22 So in this manual, particularly,</p> <p>23 you're going to see that that operator can either</p> <p>24 do a limit check to send an alarm because they</p> <p>25 could check the low water or low gas or anything</p>

<p style="text-align: right;">Page 46</p> <p>1 of that -- flame failure or anything of that  2 that's going to signal an alarm to the remote  3 station, or they can do a communication check, as  4 I spell out here.</p> <p>5           As to your suggestion, absolutely,  6 boiler training, we agree with that. As a matter  7 of fact, this particular location, I went by -- I  8 was there yesterday and preparing to create their  9 boiler training program, taking video of the  10 individual training, them going through the  11 processes, taking photographs. We went through  12 the gamut of every one of those tests, including  13 flame failure, gas pressure, combustion air  14 pressure, low water, so on and so forth. So that  15 is something that, as you know very well, is  16 required in a boiler operator. But we're talking  17 about the communications here, and that's what  18 we're doing.</p> <p>19           MR. BAUGHMAN: Thank you very much  20 for going through and answering these questions,  21 Mr. Toth.</p> <p>22           MR. TOTH: No problem.</p> <p>23           MR. BAUGHMAN: So in Section 4,  24 page 8, Item (a), I believe -- I hope that's  25 right -- there's a statement that at the end of</p>	<p style="text-align: right;">Page 47</p> <p>1 the shift, the personnel should meet to discuss --  2 "At the end of their shift, the boiler attendant  3 should meet at the boiler to discuss the boiler's  4 status, any operational information or alarms,  5 previous -- and it gets down to the changing of  6 the word "should" to "shall." I don't know if --  7 what your thoughts are, but it leaves -- and I  8 agree, they should meet. And I don't know, we  9 really don't have a requirement that says "shall."  10 And that can be for a future discussion, but it  11 leaves to where nobody is being required to  12 communicate.</p> <p>13           It's kind of almost like the old Bugs  14 Bunny cartoon where the guy that's overlooking the  15 sheep and they're swapping and going by and saying  16 how is your day and what have you. But there's no  17 need for communication or no mandate for  18 communication. And I just think that what we're  19 dealing with, potential catastrophic-event  20 equipment, that communication is paramount.</p> <p>21           But I want to get your thoughts on  22 the "should" and "shall."</p> <p>23           MR. TOTH: Absolutely. Well, I can  24 give them to you in two different ways.  25 Number one, let's get an understanding of code</p>
<p style="text-align: right;">Page 48</p> <p>1 terminology. We'll call it code lingo, where when  2 you look in the code book and see the word  3 "shall," it's a requirement. "Should" is only a  4 recommendation unless the jurisdictional authority  5 or whoever is over that makes it a shall. And the  6 "may" is just purely recommendation.</p> <p>7           And you'll see that in forwards of  8 code books all around the world. My personal  9 belief in how I advise my clients and train my  10 clients is, absolutely, we do a swap over. I'm an  11 old Navy guy, and it was taking over the watch.  12 And in taking over the watches, you have a  13 discussion of what's on line, what the operations  14 is, has there been any adverse conditions. I  15 agree 100 percent with that.</p> <p>16           Now, what you're going to run into is  17 the companies have shifts that they operate. Now  18 you're going to start putting yourself in a  19 position where you're telling a company that they  20 have to overlap manpower. I have some companies  21 that do. I have a lot of companies that do. And  22 a lot of companies I request them to do. Which  23 means you have somebody coming in 30 minutes prior  24 to the person going outbound 30 minutes later.  25 That's fine. But that's not something that is</p>	<p style="text-align: right;">Page 49</p> <p>1 going to be easily regulated or required.</p> <p>2           So our personal beliefs are one  3 thing, but, again, you're starting to get into how  4 they should be operating. The way that we tie  5 those two together is by a boiler log. That  6 boiler log is the communication piece. When  7 somebody takes on a shift -- when we're talking  8 about a boiler attendant/boiler operator takes on  9 a shift, their responsibility is to report to  10 boiler room and take readings. Those readings are  11 going to also show the readings from the previous  12 individual.</p> <p>13           That's where that communication is  14 held fast. If they have an overlap and they can  15 do it in person, that's great. But the mandate  16 and the requirement is that boiler log.</p> <p>17           MR. BAUGHMAN: Thank you, Mr. Toth.  18           How many personnel are at the  19 security dispatch station?</p> <p>20           MR. TOTH: There are three.</p> <p>21           MR. BAUGHMAN: On all three shifts?</p> <p>22           MR. TOTH: Yes.</p> <p>23           Mr. Chairman and Mr. Baughman, if I  24 may, I know that when we reapply, reenter, that  25 opens the manual up for opportunity for this, for</p>

<p style="text-align: right;">Page 50</p> <p>1 scrutiny. Nothing has changed in this manual that  2 was not spoke upon in March, including the  3 questions that are being asked now. I'll be more  4 than happy to reiterate what I did back in March,  5 which is there are three individuals in that room;  6 it is manned 24/7.</p> <p>7 MR. BAUGHMAN: And I appreciate  8 that, Mr. Toth. And yes, there's questions that  9 do come up over reevaluation and going in. I know  10 we did pass it, but upon reading in more detail,  11 questions do come up, whether myself or others.</p> <p>12 The other question I have is there's  13 a description that describes non-engineering  14 department personnel of the engineering  15 department. And I don't -- this is, I believe  16 it's under Section 5 -- let's see. Well, I wrote  17 down 5(a), but that, I believe, is under  18 Section 4, page 11, under Restart Procedure.  19 There's a note that says "Non-Engineering  20 Department Boiler Attendants shall not attempt to  21 restart a boiler."</p> <p>22 My only clarification was there's no  23 identification. We make an assumption of who is  24 engineering and non-engineering, senior lead tech,  25 maintenance lead techs and so forth. But there's</p>	<p style="text-align: right;">Page 51</p> <p>1 no specific identification. I've got, under the  2 emergency call list, an engineering department  3 boiler attendant. But then I've also got team  4 leader, facility service manager; and I don't know  5 what's actually classified under engineering  6 department or non-engineering department.</p> <p>7 MR. TOTH: Well, if you would,  8 Mr. Baughman, if you'll take a look on page 21,  9 you'll see an organizational chart. The  10 organizational chart shows the corporate director  11 of engineering and the hierarchy of the  12 individuals that fall under engineering. And then  13 there's a communication line that goes over to the  14 safety director and the safety dispatchers that  15 are located in the PBX. Those would be classified  16 as your "non."</p> <p>17 CHAIRMAN MORELOCK: Well, and while  18 we're looking at the organization chart, we did  19 ask, in March, to delineate on your org chart  20 who's the remote attendant and who's the boiler  21 attendant for clarity, that we're actually  22 discussing right now. So if you'll add that, I  23 think that will help your org chart.</p> <p>24 MR. TOTH: Sorry for omitting that.  25 MR. BAUGHMAN: One note that I made</p>
<p style="text-align: right;">Page 52</p> <p>1 was under the senior facility service tech job  2 description. It shows him interfacing with  3 elevator inspectors and elevator maintenance  4 personnel, but it does not -- that will be on  5 page 29, Number 2 -- interfaces with elevator  6 maintenance contractor and elevator inspector to  7 assure elevators operate, but it left out boilers,  8 so --</p> <p>9 MR. TOTH: Maybe they don't.  10 MR. BAUGHMAN: Okay.  11 MR. TOTH: I mean, it's maybe  12 somebody else that does that.</p> <p>13 MR. BAUGHMAN: Okay. Well, being  14 the senior facility service technician, I would've  15 assumed he did. But there again, that's an  16 assumption, so...</p> <p>17 I was just interested to why he  18 didn't have that listed.</p> <p>19 CHAIRMAN MORELOCK: Well, in  20 Appendix G is all that job requirement, not just  21 the boilers.</p> <p>22 MR. BAUGHMAN: Thanks, Marty.  23 MR. TOTH: No. problem.  24 MR. BAUGHMAN: One other question I  25 just was curious on: Who builds the remote</p>	<p style="text-align: right;">Page 53</p> <p>1 panels -- or who built the remote panel for this  2 project?</p> <p>3 MR. TOTH: Boiler Supply Company.  4 MR. BAUGHMAN: Boiler Supply.  5 Thank you.</p> <p>6 CHAIRMAN MORELOCK: Any other  7 questions or comments?  8 (No verbal response.)  9 CHAIRMAN MORELOCK: The only  10 question I have is has the State made a site visit  11 for the March variance of four boilers, or were  12 you going to wait until the fifth one was put into  13 operation?</p> <p>14 MR. O'GUIN: I think we're waiting  15 till the fifth one was put into operation.  16 CHAIRMAN MORELOCK: Is that  17 correct?  18 MR. TOTH: That is correct. And if  19 I may add, the reason for the timeline was when we  20 came in March, didn't really know the extent of  21 how far out the new installation would be, and so  22 they took that approach. Whenever the new  23 installation would be able to get on track and  24 before schedule, it was, okay, well, let's hold  25 off. Let's get the fifth one. Let's reapply it</p>

<p style="text-align: right;">Page 54</p> <p>1 with the revisions, and then we'll go through the 2 process.</p> <p>3 CHAIRMAN MORELOCK: Okay. And 4 they've been good running the 20-minute rule on 5 that?</p> <p>6 MR. TOTH: They have, yes.</p> <p>7 CHAIRMAN MORELOCK: Okay. All 8 right. Thank you.</p> <p>9 Any other questions or comments? 10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: If not, do I 12 have a motion to approve this revision to an 13 existing variance to add this fifth boiler 14 contingent on a successful site visit by the 15 Boiler Unit, and any comments made during this 16 review by the Tennessee Board?</p> <p>17 DR. HARGROVE: Motion to approve.</p> <p>18 CHAIRMAN MORELOCK: Okay. Do I 19 have a second?</p> <p>20 MR. BOWERS: Second.</p> <p>21 CHAIRMAN MORELOCK: Any other 22 questions or comments? 23 (No verbal response.)</p> <p>24 CHAIRMAN MORELOCK: Hearing none, 25 I'm going to call the question. All in favor say</p>	<p style="text-align: right;">Page 55</p> <p>1 aye.</p> <p>2 (Affirmative response.)</p> <p>3 CHAIRMAN MORELOCK: Opposed? 4 (No verbal response.)</p> <p>5 CHAIRMAN MORELOCK: Abstentions, 6 Not voting?</p> <p>7 (No verbal response.)</p> <p>8 CHAIRMAN MORELOCK: Mr. Toth, you 9 have five boilers in your variance now.</p> <p>10 MR. TOTH: Great. So if I may ask, 11 the only editorial change was...</p> <p>12 CHAIRMAN MORELOCK: To delineate 13 who is considered a boiler attendant and a remote 14 station on your org chart. Because when people go 15 out and look at it, they're, like, you know --</p> <p>16 MR. TOTH: Okay.</p> <p>17 CHAIRMAN MORELOCK: So that's where 18 you get the questions.</p> <p>19 MR. TOTH: And then the editorial 20 changes that I mentioned, adding the new 21 information.</p> <p>22 CHAIRMAN MORELOCK: Yes. But about 23 Mr. Baughman's question, if you do look on 24 page 29, Appendix G, it tells you that that person 25 does serve as a certified boiler attendant while</p>
<p style="text-align: right;">Page 56</p> <p>1 the boiler attendant variance is in place. So 2 it's in there. All right. Thank you very much.</p> <p>3 MR. BAUGHMAN: And that was 4 approval upon inspection.</p> <p>5 CHAIRMAN MORELOCK: Yes. It's 6 always contingent on inspection, yes. So it's 7 always a contingent approval.</p> <p>8 Okay. Moving on to our next old 9 business item, which is 19-17. Nokian Tyres is 10 requesting a variance for two high-pressure 11 boilers.</p> <p>12 So come forward, introduce 13 yourselves, and present your variance request.</p> <p>14 Are there any conflicts on this item? 15 (No verbal response.)</p> <p>16 MR. TRAUNERO: For Nokian Tyres, 17 Matt Traunero, utilities engineer.</p> <p>18 MR. TOTH: Marty Toth with ECS 19 Consulting.</p> <p>20 Mr. Chairman and members of the 21 board, thank you again. I'm very happy to be able 22 to present this manual for Nokian Tyres. As you 23 will see, Nokian Tyre has a very unique operation, 24 which is really exciting.</p> <p>25 Nokian Tyres' operation has its own</p>	<p style="text-align: right;">Page 57</p> <p>1 utility building. The utility building is manned 2 by two utility operators that are responsible for 3 that utility building. They are -- at this 4 current time, they are operating two high-pressure 5 boilers.</p> <p>6 Before we get deeper into that, we 7 did have a couple editorial changes I would like 8 to bring to the board's attention, if you would.</p> <p>9 One of which is, prior to printing, we did not 10 have the boiler Tennessee numbers. Let's go ahead 11 and, if we would, take a look at page 11.</p> <p>12 MS. BENNETT: Excuse me.</p> <p>13 Mr. Morelock, did you ask for conflicts?</p> <p>14 CHAIRMAN MORELOCK: I did.</p> <p>15 MS. BENNETT: Okay. I'm sorry. I 16 missed it.</p> <p>17 CHAIRMAN MORELOCK: Dr. Hargrove 18 reminded me and I did it.</p> <p>19 MS. BENNETT: Okay. Thank you. 20 I'm sorry to interrupt.</p> <p>21 MR. TOTH: So under page 11, Boiler 22 Number 1, the Tennessee number is, T127466. And 23 Boiler Number 2 is T127465, which I may add has 24 caused some distress to my counterpart next to me 25 because Boiler Number 1 ends in 6 and Number 2</p>

<p style="text-align: right;">Page 58</p> <p>1 ends in 5. But he'll be okay.</p> <p>2           And the set pressures for these</p> <p>3 boilers are 292 psi. So as you can see, Nokian</p> <p>4 Tyres, you can imagine what they do. They make a</p> <p>5 very nice product. I will let Matt kind of take</p> <p>6 you through their operations, give you a little</p> <p>7 bit of oversight on that, and then I'll get back</p> <p>8 into the equipment.</p> <p>9           MR. TRAUNERO: Nokian Tyres is a</p> <p>10 Finnish-based tire manufacturer. This facility is</p> <p>11 their first U.S. factory with hopes for expansion</p> <p>12 in the future. We consider ourselves to have a</p> <p>13 very safe culture, a culture very focused on</p> <p>14 quality and on environmental and sustainability</p> <p>15 concerns. We have a plant atmosphere that is very</p> <p>16 safety oriented, and a very close-knit group.</p> <p>17           MR. TOTH: Okay. So if we go to</p> <p>18 page 12, the deaerator, we have the Tennessee</p> <p>19 number that's placed on that is T127463.</p> <p>20           We'll look over on page 15. There</p> <p>21 was, obviously, a printing error that came from</p> <p>22 the printer that way when these were sent out.</p> <p>23 That will be revised.</p> <p>24           And then, also, if you look on</p> <p>25 page 22, the title is utilities operator. It's</p>	<p style="text-align: right;">Page 59</p> <p>1 actually utility. And then that carries over to</p> <p>2 page 27 under boiler attendant, utility operator.</p> <p>3 And we will make sure that that is searched</p> <p>4 through completely before we get a final copy for</p> <p>5 inspection.</p> <p>6           CHAIRMAN MORELOCK: So -- excuse</p> <p>7 me, Mr. Toth. So on page 22, the title is</p> <p>8 utilities operator?</p> <p>9           MR. TOTH: Utility operator.</p> <p>10           CHAIRMAN MORELOCK: Utility</p> <p>11 operator. And you also have a typo in operator.</p> <p>12           MR. TOTH: Thanks. I will make</p> <p>13 sure and correct that as well.</p> <p>14           CHAIRMAN MORELOCK: Thank you.</p> <p>15           MR. TOTH: So if we take a look,</p> <p>16 just to kind of touch on, back on page 12, looking</p> <p>17 at these boilers, a beautiful boiler operations</p> <p>18 setup here, we have two boilers that have an MAWP,</p> <p>19 maximum allowable working pressure, of 325 psi.</p> <p>20 We also are utilizing Hawk 4000 systems on these</p> <p>21 boilers with a master panel. As I mentioned in</p> <p>22 the letter, the request letter, the thought is to</p> <p>23 expand as we go. There's plenty of room in the</p> <p>24 boiler room itself for two more boilers of this</p> <p>25 type. I was very happy I was able to go by and</p>
<p style="text-align: right;">Page 60</p> <p>1 meet with Matt at the plant again just to verify</p> <p>2 that we are ready, which we are. So once we get</p> <p>3 through this process, we would be requesting for</p> <p>4 an inspection in the very near future.</p> <p>5           One of the things that you will also</p> <p>6 see is that we do have a very large deaerator.</p> <p>7 Again, it's not technically part of the process,</p> <p>8 but it is -- it has been inspected and has been</p> <p>9 registered.</p> <p>10           If you will flip back over to</p> <p>11 page 10, there is another editorial, just for your</p> <p>12 understanding. If you'll see, we have -- this</p> <p>13 whole schematic here shows the utility room itself</p> <p>14 or utility building itself. There is an e-stop,</p> <p>15 local e-stop, so we have three currently showing</p> <p>16 on the diagram for e-stops. These are all going</p> <p>17 external to the building itself. So they're</p> <p>18 pedestrian exits going outside of the building.</p> <p>19           There was also -- the installer also</p> <p>20 put a fourth e-stop going into the electrical</p> <p>21 room. That electrical room itself is a locked</p> <p>22 electrical room that is not classified as a point</p> <p>23 of egress. That will and has been trained to the</p> <p>24 individuals, the operators at the location, but</p> <p>25 just wanted to make note that we will include that</p>	<p style="text-align: right;">Page 61</p> <p>1 as well.</p> <p>2           As you can see, though this is a very</p> <p>3 large building that houses a lot of equipment, the</p> <p>4 e-stop panels, we actually have four separate</p> <p>5 e-stop panels outside of the boiler room just in</p> <p>6 case the utility operator is in any of these</p> <p>7 zones. And we're giving the distance from the</p> <p>8 boiler room to each of these panels.</p> <p>9           And as you can see, I went through</p> <p>10 and did a decibel reading throughout the entire</p> <p>11 building to verify that the e-stops that we are</p> <p>12 putting in are sufficient enough to hear over any</p> <p>13 equipment operations.</p> <p>14           I would also like to add that there</p> <p>15 is communications between these two utility</p> <p>16 operators by way of a radio system. At no time</p> <p>17 during the shift will there not be a utility</p> <p>18 operator in the boiler room -- or excuse me -- in</p> <p>19 the utility building. So they will be in vicinity</p> <p>20 of all the remote panels or personally in the</p> <p>21 boiler room itself. If for some reason there is a</p> <p>22 situation that occurs outside of the utility</p> <p>23 building that requires one of the utility</p> <p>24 operators to leave it, there will be a</p> <p>25 communication from that utility operator to the</p>

<p style="text-align: right;">Page 62</p> <p>1 second operator informing them that they will be 2 out of the utility building and the expected 3 return.</p> <p>4           If at any time during that period 5 there is an alarm on the boilers, the procedure 6 that's taught to the attendant is to activate a 7 remote panel on the affected boiler, communicate 8 to the second utility operator. At that time, 9 that second utility operator is to report 10 immediately to the utility building. The utility 11 operators do not leave the campus of the plant at 12 any time during their shifts.</p> <p>13           I'm open to any questions you may 14 have.</p> <p>15           CHAIRMAN MORELOCK: Do I have a 16 motion to discuss?</p> <p>17           MR. BOWERS: I make a motion to 18 discuss.</p> <p>19           MR. BAUGHMAN: Second.</p> <p>20           CHAIRMAN MORELOCK: Okay. What 21 questions/comments do you have?</p> <p>22           MR. BOWERS: From the diagram where 23 the operator -- I guess it's an operator room? Is 24 that --</p> <p>25           MR. TOTH: Are we saying the site</p>	<p style="text-align: right;">Page 63</p> <p>1 plan?</p> <p>2           MR. BOWERS: Yes, the site plan on 3 page 10. He has to go through a locked door to 4 get to the boilers? Is that...</p> <p>5           MR. TOTH: He would have to come 6 outside. There's a pedestrian door there. That 7 pedestrian door then follows over to the boiler 8 room. And the reason for that is because the 9 level of safety that this company has. They do 10 not want individuals -- they do not want to 11 utilize their electrical panel room as a 12 pass-through. So in the design, it is -- those 13 doors remain locked. To access the boiler room, 14 it's simply just a walk-through from one door into 15 the next.</p> <p>16           MR. BOWERS: So if he's in that 17 room, he would have to go outside to come in to 18 look at the boilers.</p> <p>19           MR. TOTH: Yes. And that's their 20 normal operation of going through, all the way 21 over to the pump room at the far end of building, 22 checking the fire pumps to checking the chillers, 23 and checking the compressor systems. And that's 24 what I really like about the way Nokian did this 25 and set this up, is they have a dedicated building</p>
<p style="text-align: right;">Page 64</p> <p>1 just for that so they're able to be efficient and 2 to be able to cover that space very well 3 throughout the day.</p> <p>4           MR. BOWERS: And just for my own 5 curiosity, since they do have full-time operators, 6 why are they going after a variance?</p> <p>7           MR. TOTH: Well, the reason is, is 8 because they do have other duties within that 9 utility building. If they were on the compressor 10 end of that building, which is one of the furthest 11 ends, every 20 minutes they would, in essence, be 12 required to go into the boiler room, would they 13 not? So therefore, this allows them to be able to 14 monitor the operations, be able to monitor any 15 alarms, but then also take the readings on a 16 four-hour cycle.</p> <p>17           CHAIRMAN MORELOCK: Any other 18 questions?</p> <p>19           DR. HARGROVE: Thank you, Mr. Toth, 20 on making those editorial changes initially.</p> <p>21           My question is to the employee of the 22 company. On Section 4, page 9, regarding the 23 boiler alarm, Item 3, "Notify production over a 24 two-way radio that a boiler(s) is down on alarm," 25 what, specifically is the production person who's</p>	<p style="text-align: right;">Page 65</p> <p>1 contacted?</p> <p>2           MR. TRAUNERO: They will reach out 3 to the production supervisor or lead personnel 4 on -- excuse me -- within the curing department to 5 inform them that there is a steam interruption 6 going on for any potential production impact.</p> <p>7           DR. HARGROVE: So the contact 8 person is the production supervisor.</p> <p>9           MR. TRAUNERO: Yes.</p> <p>10           DR. HARGROVE: Okay. Is that for 11 that particular region or for the plant itself?</p> <p>12           MR. TRAUNERO: For that particular 13 region, we only -- we have one department that is 14 a large consumer steam where the interruption will 15 impact production.</p> <p>16           DR. HARGROVE: Okay. I would like 17 to request to notify the production supervisor or 18 that individual rather than just the general 19 statement, "notify production" of this alarm 20 situation.</p> <p>21           MR. TOTH: Is that a correct 22 statement, that it's a supervisor or lead?</p> <p>23           MR. TRAUNERO: Yes.</p> <p>24           MR. TOTH: So they are going to 25 have a radio as well.</p>

<p style="text-align: right;">Page 66</p> <p>1 MR. TRAUNERO: There's a supervisor 2 on first shift that will have a radio, and then 3 each shift will have a lead. 4 DR. HARGROVE: Okay. 5 MR. TOTH: So would it be 6 satisfactory to you, Dr. Hargrove, if we not just 7 put supervisor, but supervisor, slash, lead, 8 because as Mr. Traunero alluded to, the supervisor 9 for that production is on the first shift with 10 leads that have that responsibility for shift 2 11 and 3. 12 DR. HARGROVE: Well, I think that 13 the answer to that is who is notified regarding to 14 production? 15 MR. TOTH: And I agree. And I 16 think that that's probably why we went with 17 "production," because the actual title of the 18 individual changes from shift 1 to shift 2 and 3. 19 So shift 1 is the supervisor that's over all of 20 production. 21 DR. HARGROVE: Okay. 22 MR. TOTH: And they have almost 23 like assistant supervisors that they call leads 24 that serve in that role during the second shift 25 and the third shift. And that's why I think we</p>	<p style="text-align: right;">Page 67</p> <p>1 went with a generic term that said "production." 2 But we'll be more than happy to specify that. 3 DR. HARGROVE: Yeah. Let's put 4 them both in there. Thank you. 5 CHAIRMAN MORELOCK: Any other 6 questions and comments? 7 MR. BOWERS: On steam interruption, 8 how long before it would start affecting the 9 product? 10 MR. TRAUNERO: It's a matter of how 11 many curing presses are running at a time. If 12 there's not many presses running, it could take 13 20 minutes. If we have a full line of presses 14 going, it could be very few minutes to convert the 15 steam header and get that one to the point that 16 it's affecting production. 17 MR. TOTH: And as you will -- 18 different than the previous variance with 19 Parkwest, Nokian Tyres has gone the route of one 20 e-stop kills all boilers locally, which, as we 21 would agree, is -- can be construed as a safer way 22 of doing it. But instead of going with separate 23 e-stops, they go with one e-stop. 24 So if we do have a situation that one 25 of the boilers of the two existing boilers right</p>
<p style="text-align: right;">Page 68</p> <p>1 now goes down, they hit an e-stop, they're going 2 to lose production, which is fine by them, 3 absolutely, because, again, their concentration is 4 heavily on safety. 5 CHAIRMAN MORELOCK: Other 6 questions? 7 MR. BAUGHMAN: Yes. Mr. Toth, it's 8 just part of my age or what have you, but I have a 9 hard time looking at the site plans and what's a 10 single line, double line, and so forth on it. So 11 I would love to have bigger items to be able to 12 look at. But the question comes back down to the 13 boiler room. And just identify for me where 14 Boiler 1 and 2 is, and, further, going into the 15 future boilers, because I don't know if that's a 16 wall that's separating the boiler room. 17 MR. TOTH: Oh, okay. That is not. 18 MR. BAUGHMAN: Okay. So that'll 19 all be -- 20 MR. TOTH: That's a very good 21 question. A very good question. This, the boiler 22 room itself, is one large enclosure. Okay? 23 There is no walls that separate the two. You'll 24 see the illustration showing where the future 25 boiler installation will be, down the road. It</p>	<p style="text-align: right;">Page 69</p> <p>1 could be one boiler at a time or it could be both. 2 And so that's just one very large good-looking 3 boiler room. 4 MR. BAUGHMAN: Very good. And with 5 that, can you identify for me where the points of 6 egress are at within the boiler room? 7 MR. TOTH: Sure. If you'll see, 8 Mr. Baughman, from the legend at the bottom of the 9 page, it indicates where the emergency stop 10 buttons are. That is exactly where your points of 11 egress are in the boiler room, and then, also, 12 where we included an extra e-stop that goes into 13 the electrical room. But the points of egress are 14 those three existing locations. 15 MR. BAUGHMAN: Very good. Now, the 16 electrical room, there again, that one door is 17 locked. How is the locking mechanism -- can it be 18 opened from both sides? In other words -- 19 MR. TOTH: It's mechanical. 20 MR. TRAUNERO: Coming from the 21 electrical room, there is a push bar. Going from 22 the boiler room into there, it's a key card. It's 23 a scanning key card access to get within that 24 room, and there's a door handle. 25 MR. BAUGHMAN: Are both those doors</p>

<p style="text-align: right;">Page 70</p> <p>1 locked in the electrical room?</p> <p>2 MR. TRAUNERO: Yes.</p> <p>3 MR. BAUGHMAN: Okay. Going to your</p> <p>4 feedwater system -- nice system, by the way -- is</p> <p>5 this system all up and operational?</p> <p>6 MR. TRAUNERO: Yes, it is.</p> <p>7 MR. BAUGHMAN: Okay. So everything</p> <p>8 is installed, ready to go.</p> <p>9 MR. TRAUNERO: Yes, it is.</p> <p>10 MR. BAUGHMAN: What a blessing. On</p> <p>11 your feedwater system in this large DA, as steam</p> <p>12 goes out through the system and is going through</p> <p>13 your equipment, how is it returning back as</p> <p>14 condensate to the DA?</p> <p>15 MR. TRAUNERO: The condensate being</p> <p>16 returned to the DA is -- we actually have a</p> <p>17 three-bar flash steam system to generate three-bar</p> <p>18 steam, and then we're using Sarco pressure-powered</p> <p>19 pumps to pump back to the generator.</p> <p>20 MR. BAUGHMAN: Got you. So the</p> <p>21 condensate is actually going back to the</p> <p>22 condensate receiver being pumped over to the</p> <p>23 feedwater --</p> <p>24 MR. TRAUNERO: Yes.</p> <p>25 MR. BAUGHMAN: -- or to the DA.</p>	<p style="text-align: right;">Page 71</p> <p>1 Fantastic. And the reason I come up with this is</p> <p>2 the system where we had an incident back a few</p> <p>3 years ago within a DA, and so that's why the</p> <p>4 questions I had -- yeah, it was using a different</p> <p>5 type of system. But I'm anticipating you're using</p> <p>6 modulating feedwater on these so that's where my</p> <p>7 thought process was going on that. Very good.</p> <p>8 Thank you, Mr. T. -- Matthew.</p> <p>9 MR. TRAUNERO: That's fine.</p> <p>10 CHAIRMAN MORELOCK: Any other</p> <p>11 questions?</p> <p>12 (No verbal response.)</p> <p>13 CHAIRMAN MORELOCK: I just have a</p> <p>14 couple. Because of the way the building is</p> <p>15 designed, it's pretty unique. And so with a</p> <p>16 utility operator serving as a boiler attendant,</p> <p>17 they technically also serve as a remote monitor,</p> <p>18 correct?</p> <p>19 MR. TOTH: Yes, they do.</p> <p>20 CHAIRMAN MORELOCK: And so my only</p> <p>21 recommendation is, on your organizational chart,</p> <p>22 clarify that. And -- I mean, I figured it out by</p> <p>23 reading it, but, also, on page 3, Item E, you say</p> <p>24 an instruction placard instructs remote station</p> <p>25 personnel, and so we need to make sure that people</p>
<p style="text-align: right;">Page 72</p> <p>1 understand that those guys have two badges. They</p> <p>2 can flip it over to be a remote monitor or they</p> <p>3 can flip it over and be a boiler attendant.</p> <p>4 MR. TOTH: Absolutely. Absolutely.</p> <p>5 And that is -- and that's why it's the remote</p> <p>6 panel --</p> <p>7 CHAIRMAN MORELOCK: Yes.</p> <p>8 MR. TOTH: -- is because when</p> <p>9 they're serving that role as we look at -- in a</p> <p>10 normal operation, you have the two individuals in</p> <p>11 the building. One individual on one side gets the</p> <p>12 alarm and he hits it. He's going to be able to</p> <p>13 communicate. The second individual goes to the</p> <p>14 boiler room. If that's not the case, that</p> <p>15 individual, obviously, is serving both roles.</p> <p>16 CHAIRMAN MORELOCK: Right.</p> <p>17 MR. TOTH: And so we go -- but the</p> <p>18 communication is still there. So how would you</p> <p>19 like for me to --</p> <p>20 CHAIRMAN MORELOCK: No. I mean,</p> <p>21 the process is fine. It's just when you read</p> <p>22 "remote station personnel," we don't really say</p> <p>23 clearly that the utility operator serves both</p> <p>24 roles.</p> <p>25 MR. TOTH: Can you point that out</p>	<p style="text-align: right;">Page 73</p> <p>1 for me, where you read that?</p> <p>2 CHAIRMAN MORELOCK: On page 3,</p> <p>3 Item E. It just says "remote station personnel."</p> <p>4 MR. TOTH: Perfect. Right.</p> <p>5 CHAIRMAN MORELOCK: So you know...</p> <p>6 MR. TOTH: I will take care of</p> <p>7 that.</p> <p>8 CHAIRMAN MORELOCK: Yeah. And so</p> <p>9 you can just -- and then on page 19, you say</p> <p>10 utility operator, and you've got, parenthetical,</p> <p>11 boiler attendant, but you also need,</p> <p>12 parenthetical, remote station as well.</p> <p>13 MR. TOTH: Okay. Sure.</p> <p>14 CHAIRMAN MORELOCK: Just to help</p> <p>15 folks like me figure it out.</p> <p>16 MR. TOTH: Okay.</p> <p>17 CHAIRMAN MORELOCK: And so you have</p> <p>18 two per shift, correct?</p> <p>19 MR. TOTH: Yes.</p> <p>20 CHAIRMAN MORELOCK: Okay. That</p> <p>21 answers that. And that's all the comments I have.</p> <p>22 Are there any other comments?</p> <p>23 MR. BAUGHMAN: There was. And</p> <p>24 thank you again.</p> <p>25 So the alarm panel gives off an</p>

<p style="text-align: right;">Page 74</p> <p>1 audible alarm.</p> <p>2 MR. TRAUNERO: Uh-huh.</p> <p>3 MR. BAUGHMAN: My question is, in a</p> <p>4 production area, do you know what the noise level</p> <p>5 is?</p> <p>6 MR. TOTH: Again, this is separate</p> <p>7 than the production area.</p> <p>8 MR. BAUGHMAN: Got you.</p> <p>9 MR. TOTH: This is a separate</p> <p>10 building. The production area is a complete --</p> <p>11 there's actually a pass-through, if you will, an</p> <p>12 outdoor pass-through that goes from utility</p> <p>13 building to the second location.</p> <p>14 MR. BAUGHMAN: Very good.</p> <p>15 MR. TOTH: Yeah.</p> <p>16 CHAIRMAN MORELOCK: Indulge me one</p> <p>17 more, too, Mr. Toth. On page 23 of Appendix G,</p> <p>18 you do state that the utility operator is a boiler</p> <p>19 attendant, but there's no verbiage in there that</p> <p>20 they serve as a remote monitor.</p> <p>21 MR. TOTH: And with that, the</p> <p>22 reason is, is a definition that we've put in the</p> <p>23 manual as what a boiler attendant is and what</p> <p>24 their responsibility is.</p> <p>25 CHAIRMAN MORELOCK: Okay.</p>	<p style="text-align: right;">Page 75</p> <p>1 MR. TOTH: So I'm very aware. And</p> <p>2 that's why I said this is a unique situation.</p> <p>3 CHAIRMAN MORELOCK: It is.</p> <p>4 MR. TOTH: Because we've had others</p> <p>5 that we've brought before -- Sofix out of</p> <p>6 Chattanooga is a great example where the boiler</p> <p>7 guard serves both roles, depends upon when they</p> <p>8 walk through the door. This one, they're a remote</p> <p>9 attendant; that one, they're a boiler attendant.</p> <p>10 And what we did here, because there's not a manned</p> <p>11 station that they are at, the boiler attendant</p> <p>12 assumes the responsibility of both. So instead of</p> <p>13 being confusing and having a section talk about a</p> <p>14 remote attendant and then a section talk about</p> <p>15 boiler attendant they being the same people, it</p> <p>16 was let's grab that term. And if that term is</p> <p>17 better suited for this board and for the State of</p> <p>18 understanding that that title is, you know, boiler</p> <p>19 remote attendant, I would be more than happy to</p> <p>20 revise the manual to stipulate that as a title.</p> <p>21 That's absolutely fine.</p> <p>22 CHAIRMAN MORELOCK: Well, I don't</p> <p>23 want you to have to generate more terminology, but</p> <p>24 just, you know, clarify, based on comments --</p> <p>25 MR. TOTH: It's clarified.</p>
<p style="text-align: right;">Page 76</p> <p>1 Clarification. Absolutely. I do not have a</p> <p>2 problem doing that.</p> <p>3 CHAIRMAN MORELOCK: Okay. That's</p> <p>4 fine. Thank you. Other questions or comments?</p> <p>5 MR. BAILEY: Have you had a chance</p> <p>6 to make all the editorial changes?</p> <p>7 MR. TOTH: That they're mentioning?</p> <p>8 MR. BAILEY: Yeah. Because they</p> <p>9 were mentioning them, and I saw you were trying</p> <p>10 to...</p> <p>11 MR. TOTH: Well, there was the one</p> <p>12 Mr. Chairman had mentioned on page -- it said</p> <p>13 page 13, but page 13 is actually --</p> <p>14 CHAIRMAN MORELOCK: It's page 3, I</p> <p>15 believe.</p> <p>16 MR. TOTH: -- equipment. It was 3.</p> <p>17 And then you also mentioned on the -- I believe</p> <p>18 you mentioned on the org chart, if I'm not</p> <p>19 mistaken.</p> <p>20 CHAIRMAN MORELOCK: Yes, that's</p> <p>21 correct.</p> <p>22 MR. TOTH: And so you said on the</p> <p>23 org chart you wanted this to also -- I think</p> <p>24 Matthew and I will discuss, but I think it --</p> <p>25 simply enough for clarification's sake, calling</p>	<p style="text-align: right;">Page 77</p> <p>1 them a remote boiler attendant throughout the</p> <p>2 manual will probably suffice for any type of --</p> <p>3 because we are used to seeing, especially in my</p> <p>4 manuals, come across as a boiler attendant and no</p> <p>5 remote attendant. So if we put those together, I</p> <p>6 think that will solve any confusion.</p> <p>7 CHAIRMAN MORELOCK: Okay. Thank</p> <p>8 you.</p> <p>9 Any other questions or comments?</p> <p>10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: Hearing none,</p> <p>12 do I have a motion to contingently approve this</p> <p>13 variance based on revisions to the manual based on</p> <p>14 comments from the Tennessee Board, as well as a</p> <p>15 successful site visit by the Boiler Unit?</p> <p>16 MR. FOX: I'll make that motion.</p> <p>17 MR. BOWERS: I second.</p> <p>18 CHAIRMAN MORELOCK: Any more</p> <p>19 discussion?</p> <p>20 (No verbal response.)</p> <p>21 CHAIRMAN MORELOCK: Hearing none,</p> <p>22 I'll call the question. All in favor say aye.</p> <p>23 (Affirmative response.)</p> <p>24 CHAIRMAN MORELOCK: Opposed?</p> <p>25 (No verbal response.)</p>

<p style="text-align: right;">Page 78</p> <p>1 CHAIRMAN MORELOCK: Abstentions, 2 not voting? 3 (No verbal response.) 4 CHAIRMAN MORELOCK: You have a 5 contingently approved variance. 6 MR. TOTH: Thank you. 7 MR. TRAUNERO: Thank you. 8 CHAIRMAN MORELOCK: It is 10:30, so 9 let's take a ten-minute break, and we'll reconvene 10 at 10:40. 11 (Recess observed.) 12 CHAIRMAN MORELOCK: Thank you-all. 13 Moving on to our next item of old business, the 14 next item is 19-21. And that is proposed changes 15 to Rule 0800-03-03.14, fees. 16 MR. HERROD: Mr. Chairman? 17 CHAIRMAN MORELOCK: Yes? 18 MR. HERROD: I'll bring you up to 19 speed on this. 20 CHAIRMAN MORELOCK: All right. 21 Thank you very much. 22 MR. HERROD: One of the things that 23 became evident as I became assistant commissioner 24 was the fact of some of the delinquency rates that 25 we had of both boilers and elevators and how do we</p>	<p style="text-align: right;">Page 79</p> <p>1 combat that and how do we attack it. 2 So what we have decided to do is to, 3 with the Governor's approval, ask for fee 4 increases that will provide salary increases that 5 will attract new inspectors and to -- we're doing 6 this, both, for elevators and boilers. 7 CHAIRMAN MORELOCK: Okay. 8 MR. HERROD: So the rule changes 9 have to do with, obviously, the boilers at this 10 time. And what you have before you are the fee 11 increases that we have proposed to the Governor, 12 the Governor's office, and which we've gotten that 13 approval. And the next step is to bring it before 14 the board and to let you know that what we would 15 like to do is, at the next board meeting, is to 16 have an open hearing with these changes, open to 17 the public so they can be in attendance. 18 So these fee increases, if you look 19 right past that, you'll see a spreadsheet that has 20 revenue. 21 MS. BENNETT: It's in your 22 notebook, gentlemen. 23 MR. HERROD: Yes, sorry. Just past 24 the agenda. 25 MR. BOWERS: It's right after the</p>
<p style="text-align: right;">Page 80</p> <p>1 minutes. 2 MR. HERROD: So on the rules as 3 presented here, the red is the proposed fee 4 increases for virtually every fee that we have for 5 boilers. And the page after that is the revenue, 6 projected revenue as a result. 7 So bottom line, if you go to the 8 bottom of here, you'll see that if we can get 9 these fee increases, that we will increase revenue 10 by 21 percent, which will help us increase our 11 salaries to our inspectors and to hire new 12 inspectors so that we can at least get competitive 13 with private industry as much as we possibly can. 14 So the overall revenue increase based 15 on these fee increases is a half a million 16 dollars, a little over \$525,000, based on current 17 number of vessels that we inspect. So the bulk of 18 that comes from the certificates, 375,000, which 19 is every vessel in the state of Tennessee that's 20 registered. And then the state inspection fees 21 add another \$150,000. 22 So what we want to do today is to 23 give you -- communicate to you what these fee 24 increases are and what we process going forward, 25 what we want to do with respect to the next board</p>	<p style="text-align: right;">Page 81</p> <p>1 meeting. And Mr. Bailey can tell you a little bit 2 more about that, what the process is. 3 MR. BAILEY: Well, because it 4 involves a fee increase, you almost have to go 5 through the rulemaking hearing process instead of 6 the proposed rule process. And either tomorrow or 7 the next day, I'll be filing what's called a 8 notice of rulemaking hearing. It's a form that I 9 have to fill out and file with the Secretary of 10 State's office. And then within seven days, they 11 have to post that on the state register as a 12 public notice. 13 But, now, we also have an obligation 14 to try to notify people that we know that might be 15 impacted by it so that they know. It's going to 16 be on the March agenda. And we'll be doing that 17 through our website and whatever the unit does. 18 But instead of having a separate meeting just for 19 the rulemaking hearing, we can add it as an agenda 20 item to your next board meeting. And there's 21 enough time for me to file that notice with the 22 Secretary of State's office, because it has to be 23 posted for at least 45 days. We've got plenty of 24 time so that can be on the March agenda. But one 25 section of that meeting, we would have to</p>

<p style="text-align: right;">Page 82</p> <p>1 basically open it up for public comments on the 2 proposed fee increases. And then whatever 3 comments we get -- and, also, even before the 4 meeting, members of the public can submit written 5 comments to us even prior to that.</p> <p>6           Once all that is done, I would 7 suggest, at that time, the board vote on whether 8 to approve the fee increases. We're required to 9 respond in writing to any of the comments, and we 10 can group them. If there's, like, several similar 11 comments, we can group them and then respond to 12 that.</p> <p>13           But anyway, if it gets through that 14 part of the hearing -- once we get through that 15 hearing, then I would submit it to the Attorney 16 General's office. Once they approve it, I would 17 submit it to the Secretary of State's office. And 18 because it's a fee increase, depending on when 19 the -- there's a possibility that it could go into 20 effect this July 1, depending on how things fall 21 out. If it isn't approved by this July 1 -- say 22 it's approved July 15th, then we have to wait 23 until the following July 1 before those fee 24 increases would go into effect. That's the way 25 the law is. So anyway, that's the process. If</p>	<p style="text-align: right;">Page 83</p> <p>1 you've got any questions, I'll be glad to answer 2 them.</p> <p>3           MR. BOWERS: So if it's approved, 4 it might go into effect for 2020, where if it 5 doesn't, it will have to go in 2021.</p> <p>6           MR. BAILEY: Correct. It would 7 depend when the final submission to the Secretary 8 of State's office gets done. Because it will be 9 90 days after that. If we can get it submitted -- 10 if we can go through the whole process and get it 11 submitted where there's still more than 90 days, 12 then it'll go in effect this July 1. But that's 13 going to be close. That's going to be a close 14 call. So we may have to wait another year.</p> <p>15           MR. BOWERS: This March meeting 16 coming up, a lot of people might attend. So is 17 this room going to be big enough to accommodate -- 18 since it's going to be a different type of --</p> <p>19           CHAIRMAN MORELOCK: Well, I mean, 20 that's an excellent question. I guess it really 21 depends on the State letting us know how much 22 response they get from the notice.</p> <p>23           And just for information, we had this 24 fee increase included in our revision to 800-03-03 25 in 2016, and we pulled the fee portion out to get</p>
<p style="text-align: right;">Page 84</p> <p>1 the rules updated. So this is really finishing 2 something we started several years ago. So it's 3 good for the -- I don't know if we can put it in 4 the public notice, but it would be good to let the 5 public know that fees have not increased for 6 several years.</p> <p>7           MR. HERROD: 2010. Ten years.</p> <p>8           CHAIRMAN MORELOCK: So it would be 9 good, as a public notice, to let people realize 10 that the fee increases has fallen far behind even 11 just the annual rate of inflation.</p> <p>12           MR. BAILEY: Right. And statute 13 caps what some of those fees can be. And we were 14 under the caps on, I guess, all of them, right?</p> <p>15           MR. HERROD: Right.</p> <p>16           MR. BAILEY: So now we're moving 17 more up to the caps. So to go beyond that, the 18 legislature would have to raise the caps.</p> <p>19           CHAIRMAN MORELOCK: So, Mr. Bowers, 20 I guess, to answer your question, if those 21 responses have to be in 45 days before the March 22 meeting, that will give us ample time to see what 23 size room we need.</p> <p>24           MS. BENNETT: Yes. And I was going 25 to say we also have access to the Pearl room,</p>	<p style="text-align: right;">Page 85</p> <p>1 which is a much larger room.</p> <p>2           CHAIRMAN MORELOCK: Yes. That's a 3 good idea.</p> <p>4           MS. BENNETT: So if it's available, 5 then we could reserve that for the March meeting 6 to accommodate everyone.</p> <p>7           MR. BAILEY: I would suggest, if it 8 is available, to go ahead and reserve it for the 9 elevator and this one, just in case. I mean, 10 because you never -- you're not going to get a 11 good idea -- I mean, nobody has to submit anything 12 prior to the meeting. They can just show up. And 13 you just don't know.</p> <p>14           CHAIRMAN MORELOCK: That's good. 15 That's very good.</p> <p>16           MR. BAILEY: I would rather have 17 more room than not enough.</p> <p>18           DR. HARGROVE: Question, is there 19 any particular reason why every other fee is 20 increased with the exception of the exam fee?</p> <p>21           MR. BAILEY: I defer to Mr. Herrod 22 on that one.</p> <p>23           MR. HERROD: I think that 24 examination fee was for the private inspectors, 25 insurance inspectors?</p>

<p style="text-align: right;">Page 86</p> <p>1 MR. CHAPMAN: The examine fee is 2 for when somebody, like, takes the exam. We 3 proctor the exam, and the only thing is just 4 proctoring it.</p> <p>5 MR. HERROD: How many do we 6 typically have?</p> <p>7 MR. CHAPMAN: Well, we haven't had 8 any in a while now, because we have AMP stations 9 that most people are going to now.</p> <p>10 MR. HERROD: Really, it wouldn't 11 add to our revenue substantially.</p> <p>12 CHAIRMAN MORELOCK: It used to be 13 mandatory for the boiler unit and someone from the 14 board to proctor those exams. But now with all of 15 that being automated through the National Board, 16 now, it's a lot more of a streamlined process. 17 You can go to an AMP exam, which is typically tied 18 to an H &amp; R Block office. You can go in there and 19 they've got a camera on you, and you take the 20 exam.</p> <p>21 MR. TOTH: Just to answer, that fee 22 is an antiquated fee because of just what was 23 explained, that it's not really -- you would have 24 to pay at the testing location now.</p> <p>25 MR. BAILEY: And just to be clear,</p>	<p style="text-align: right;">Page 87</p> <p>1 if the fees are increased, that additional revenue 2 goes into the general fund. It's not necessarily 3 appropriated to the boiler unit. However, if you 4 are able to request a higher appropriation from 5 the legislature for the boiler unit and you are 6 able to show them that we're bringing in more 7 revenue because we just raised our fees, you've 8 got a better chance of getting that higher 9 appropriation approved for additional salaries and 10 inspectors. So that's the thing.</p> <p>11 CHAIRMAN MORELOCK: So basically, 12 our support of that would lead to what you're 13 reporting, correct?</p> <p>14 MR. BAILEY: Right.</p> <p>15 MR. O'GUIN: Mr. Hargrove, I 16 believe the examination fee is already at its max, 17 is the reason it was not increased.</p> <p>18 DR. HARGROVE: And they probably 19 don't want to discourage anyone from taking the 20 exam.</p> <p>21 CHAIRMAN MORELOCK: No, that's 22 true.</p> <p>23 MR. CHAPMAN: It's hard to get 24 somebody in the first place.</p> <p>25 MR. GROSS: Mr. Chairman, Jeremy</p>
<p style="text-align: right;">Page 88</p> <p>1 Gross from Valero. Question, Mr. Bailey and 2 Mr. Herrod, on fee increases: How will those be 3 communicated to the owner-users as far as when 4 they do increase? Will they send out 5 communication out via email or how do we 6 understand that so that we can budget 7 appropriately going forward with our inspection 8 fees?</p> <p>9 MR. HERROD: Well, that is a good 10 question. I would say that once we do have 11 approval for it, then we will contact the -- we'll 12 put it up on our website, for one, to make sure 13 it's sent out that way, and then communicated 14 through our inspectors and, also, through the 15 insurance companies that will be doing the 16 inspection. And the companies, they will get a 17 notice, hopefully -- do we not send out --</p> <p>18 MS. BENNETT: The email blast?</p> <p>19 MR. HERROD: -- the email blast and 20 the -- so that's the way we will have to handle 21 it.</p> <p>22 MR. BAILEY: And the email blast, 23 does that have -- it has, like, all permit holders 24 on it or --</p> <p>25 MS. BENNETT: No. The ones who</p>	<p style="text-align: right;">Page 89</p> <p>1 have signed up for email communication.</p> <p>2 MR. BAILEY: Okay.</p> <p>3 MS. BENNETT: And I think there's 4 roughly, I think, 300 boiler people right now that 5 receive the blast.</p> <p>6 CHAIRMAN MORELOCK: To answer your 7 question, me being an owner-user as well, is if 8 you sent that notice out to all certificate 9 holders that have certificates of inspection, 10 that's going to be a good way to notify people 11 that are paying those fees now.</p> <p>12 MS. RHONE: Deborah Rhone. I think 13 in the past what we've done is we did send out 14 flyers about the fee increase, and then, also, 15 putting it on the website for the methods of 16 notification of fee increases.</p> <p>17 MR. ROBINSON: (Indicating.)</p> <p>18 CHAIRMAN MORELOCK: Yes?</p> <p>19 MR. ROBINSON: Eugene Robinson, 20 Cincinnati Insurance. If possible, also include 21 the insurance companies so they can put their 22 policyholders on notice as well. That way it will 23 be an easy transition.</p> <p>24 CHAIRMAN MORELOCK: Okay. Any 25 other questions or comments?</p>

<p style="text-align: right;">Page 90</p> <p>1 MR. BAUGHMAN: Chief, or assistant, 2 this may be for you, but just from an 3 informational standpoint on how fees are charged. 4 Let's say in a variance, particularly, that the 5 variance may fail and there's a reinspection that 6 would come up. How does that actually get billed 7 out? Is there two separate trips charged for? 8 MR. CHAPMAN: Yes. Yes, it is. We 9 still have to charge for going there to do the 10 inspection whether they pass or fail. 11 MR. BAUGHMAN: Right. 12 MR. CHAPMAN: And then when we go 13 back again, it's the same thing again, pass or 14 fail. 15 MR. BAUGHMAN: Okay. Sure. So 16 that could actually reflect, you know, the 17 revenues at some point. And it's an intangible, 18 knowing which ones are going to have to be 19 reinspected. 20 MR. CHAPMAN: Yes. 21 MR. BAUGHMAN: But this is kind of 22 a very good guideline and bottom-line figure, 23 whereas we could actually have some slight more 24 additional revenues. But that variance is 25 probably the highest cost of that or the highest</p>	<p style="text-align: right;">Page 91</p> <p>1 amount of charges that are in this fee. So 2 anything that's reinspected adds to that. In 3 other words -- 4 MR. CHAPMAN: It adds to it, but I 5 don't think it's the highest or the most under 6 that. 7 MR. BAUGHMAN: I got you. I was 8 just looking at fees for variances. On here it 9 says proposed fees, \$700. I don't see any other 10 fees that have that maximum amount. So that's why 11 I was bringing that up. 12 MR. CHAPMAN: It falls under 13 special inspection. 14 MR. BAUGHMAN: Yes. Yes. 15 MR. CHAPMAN: Okay. 16 MR. BAUGHMAN: All right. Thank 17 you. 18 MR. CHAPMAN: Uh-huh. 19 CHAIRMAN MORELOCK: Any other 20 questions or comments? 21 (No verbal response.) 22 CHAIRMAN MORELOCK: Okay. 23 Mr. Herrod, thank you for that report. We will 24 certainly prepare to cover that item in March, and 25 we just need to get the word out.</p>
<p style="text-align: right;">Page 92</p> <p>1 I think when you do get the word out, 2 I think it would be really good to let people know 3 how long it's been since the fees have been 4 increased. It's been a long time. 5 That concludes our old business. 6 Moving on to Agenda Item 8, which is new business. 7 Our first item is 19-22. Valero Memphis Refinery 8 is going to give us an update on their risk-based 9 inspection program. And we will vote for 10 continuance of that program. 11 MR. GROSS: Good morning, board and 12 guests. Jeremy Gross, I'm the inspection manager 13 for Valero Memphis Refinery. As Chairman 14 mentioned, I'm here to review the risk-based 15 inspection program status for 2019. 16 Our risk-based inspection program 17 continues to be active at the Valero Memphis 18 Refinery. The refinery continues to maintain 19 scheduled damage mechanism-specific inspections 20 planned and executed on-stream during routine 21 maintenance or major maintenance outages. 22 The key activities related to the 23 program in 2019 are as follows: The refinery 24 executed a million man-hour maintenance outage in 25 the second quarter. There were damage mechanism-</p>	<p style="text-align: right;">Page 93</p> <p>1 specific inspection activities, capital 2 reliability upgrades, and preventive maintenance 3 work scopes conducted in five process units. A 4 catalyst change outage was also completed on one 5 of our Diesel Hydrotreater units. All work scope 6 was assessed using a Risk Based Work Selection 7 process, also known as RBWS. Maintenance and 8 inspection activities executed during that outage 9 are listed in Table A. 10 The sight also underwent a Property 11 Casualty Insurance Survey in the fourth quarter. 12 This evaluation is completed on a three-year 13 interval. And the survey team consisted of Valero 14 Corporate Risk, insurance agents such as Allrisk, 15 AIG, Starr, and Berkshire-Hathaway personnel. 16 There were no mechanical integrity program 17 findings identified to put in a gap closure plan 18 as a result of that assessment. 19 We do have planning efforts that are 20 ongoing for our scheduled 2020 and 2021 21 maintenance outages. We're scheduled to remove 22 two process units from service in 2020 and four 23 process units from service in 2021 for planned 24 major maintenance and inspection activities. The 25 site is also preparing for our TOSHA VPP Star</p>

<p style="text-align: right;">Page 94</p> <p>1 Program re-validation for 2020. That is currently  2 scheduled for July. We have a May assessment  3 schedule from our own internal VPP team from San  4 Antonio corporate office. And then we will have a  5 TOSHA team come in in July.</p> <p>6 As you can see in Table A, inspection  7 types, from our internal, external, CUI,  8 jurisdictional, to non-intrusive inspections that  9 were performed in 2019. And then we also have our  10 planned inspections for 2020.</p> <p>11 As you can see, our jurisdictional  12 numbers are quite large for 2020, so we will be  13 quite busy with our insurance inspectors as well.</p> <p>14 Our risk data distribution is down  15 below. As you can see, our circuit counts from  16 our 2018 report, and you can see that data change  17 out to the right.</p> <p>18 Overall, in 2019, we did complete  19 235 internals, 324 externals, and 13 Corrosion  20 Under Insulation inspections. They were all in  21 accordance with our RBI program. Our  22 jurisdictional inspections are current and up to  23 date with no delinquents. And we also continue to  24 execute insulation and fireproofing repairs based  25 on our CUI programs and our external visual</p>	<p style="text-align: right;">Page 95</p> <p>1 inspection recommendations.</p> <p>2 What questions do you have for me?</p> <p>3 CHAIRMAN MORELOCK: Do I have a  4 motion to discuss?</p> <p>5 MR. BAUGHMAN: So moved.</p> <p>6 MR. BOWERS: Second.</p> <p>7 CHAIRMAN MORELOCK: Okay.</p> <p>8 MR. BAUGHMAN: First, Jeremy, you  9 guys had a busy year.</p> <p>10 MR. GROSS: Oh, yeah. Absolutely.</p> <p>11 MR. BAUGHMAN: I was looking over  12 the report from last year in comparison, and the  13 plan for this year on internal inspections was  14 205, and you performed 235, so 30 more internals.  15 The same thing with externals. You planned 302  16 and performed 324.</p> <p>17 MR. GROSS: Yes, sir.</p> <p>18 MR. BAUGHMAN: So -- and actually  19 had more than what was planned out. But that was  20 a busy year for you guys.</p> <p>21 MR. GROSS: Absolutely.</p> <p>22 MR. BAILEY: Mr. Chairman, did you  23 ask about conflicts?</p> <p>24 CHAIRMAN MORELOCK: I did not.</p> <p>25 MR. BAILEY: Okay.</p>
<p style="text-align: right;">Page 96</p> <p>1 CHAIRMAN MORELOCK: But yes, I  2 will.</p> <p>3 MR. BAILEY: Okay.</p> <p>4 CHAIRMAN MORELOCK: Any conflicts  5 with this?</p> <p>6 (No verbal response.)</p> <p>7 CHAIRMAN MORELOCK: With it being a  8 report, I didn't --</p> <p>9 MR. BAILEY: Right. I didn't know  10 for sure.</p> <p>11 CHAIRMAN MORELOCK: Any comments or  12 questions?</p> <p>13 MR. BAUGHMAN: Any issues that came  14 up that would be worthy of note for us from an  15 equipment standpoint?</p> <p>16 MR. GROSS: You know, David, we've  17 actually had a pretty good year as far as being  18 predictable with our program by executing a lot of  19 on-stream non-intrusive inspections. We're  20 actually very successful with our major outage  21 with not many at all major significant discovery  22 items. We were on budget, on time. And we did  23 have a few reportable injuries. They were hand  24 injuries, line-of-fire activities early on in the  25 outage. But we had a pretty good stand-down and</p>	<p style="text-align: right;">Page 97</p> <p>1 really found what we call going from the second  2 half of the football game, we really, you know,  3 tightened up there and did an excellent job of  4 finishing strong.</p> <p>5 The only area that we had an issue  6 with this year was one of our boilers actually had  7 a tube with a design issue. We had a tube plug  8 and overheat. That was fixed and put back online.  9 So from a fixed equipment standpoint, everything  10 is really -- as you say, we're very predictable,  11 which is really good. So those are the good times  12 you want to have whenever you're looking at  13 forecasting repairs and hitting your marks without  14 having any unplanned loss of containment.</p> <p>15 MR. BAUGHMAN: You're definitely  16 ahead of the curve, and a million man-hour outages  17 is big.</p> <p>18 MR. GROSS: That is a big one.</p> <p>19 CHAIRMAN MORELOCK: Any other  20 questions or comments?</p> <p>21 (No verbal response.)</p> <p>22 CHAIRMAN MORELOCK: Hearing none,  23 I'm going to call the question to approve Valero's  24 RBI report and approve them to continue this  25 program they have and bring us a report in a year.</p>

<p style="text-align: right;">Page 98</p> <p>1 MR. FOX: I make that motion to 2 approve. 3 CHAIRMAN MORELOCK: Second? 4 MR. BAUGHMAN: Second. 5 CHAIRMAN MORELOCK: Any other 6 questions or comments? 7 (No verbal response.) 8 CHAIRMAN MORELOCK: We could talk a 9 lot about RBI. It's just an excellent program 10 with aging plants and all and to make the most of 11 our manpower, to keep rotating equipment, pressure 12 equipment, all sorts of infrastructure viable into 13 the future. We just -- we have to have it. So 14 it's a really -- it's an excellent program. 15 So hearing nothing else, I'm going to 16 call the question. All in favor say aye. 17 (Affirmative response.) 18 CHAIRMAN MORELOCK: Opposed? 19 (No verbal response.) 20 CHAIRMAN MORELOCK: Abstentions, 21 not voting? 22 (No verbal response.) 23 CHAIRMAN MORELOCK: Jeremy, thank 24 you for the report. 25 MR. GROSS: Thank you.</p>	<p style="text-align: right;">Page 99</p> <p>1 CHAIRMAN MORELOCK: Next item is 2 19-24, Steris Instrument Management Services is 3 requesting a new variance for two high-pressure 4 boilers. 5 So if you'll come forward, introduce 6 yourselves, and present your item. 7 MR. BOWEN: Bruce Bowen with Steris 8 IMS. 9 MR. TOTH: And Marty Toth, ECS 10 Consulting. 11 Hello again. So we have a nice 12 little operation here at Steris in Chattanooga. 13 I'll let Mr. Bowen go into more detail about the 14 processes of it. Sterilization is pretty much in 15 their name. But what we have is we have two 16 high-pressure steam generators, Steris steam 17 generators that operate. They have a feedwater 18 tank, vented feedwater tank to their system. 19 The process, I'll let -- as I said, 20 I'll let Mr. Bowen kind of tell you about the 21 process of Steris. 22 MR. BOWEN: Steris IMS is a 23 sterilization company. We've been in business for 24 many years. They build the equipment for 25 sterilizing medical instruments and repairing</p>
<p style="text-align: right;">Page 100</p> <p>1 medical instruments. This is a new breed for 2 Steris as they are doing outsourcing from the 3 hospitals. Generally, they do all their 4 sterilization in the hospitals. 5 MR. TOTH: And so what we have is a 6 process plant -- 7 MR. BOWEN: It's just a process of 8 bringing medical instruments in, sterilizing them 9 and sending them back to the hospital. 10 MR. TOTH: Okay. As I mentioned, 11 we do have the two boilers. I do want to make 12 note of some slight editorial changes to the 13 manual that were found during review this past 14 week. 15 If you will look on page 3, you will 16 notice that we are mentioning the e-stop and the 17 panel. I'm very familiar with what you see. 18 We have decided to go with just a 19 standard reset button or a standard e-stop button 20 without the key. So that is changed out so we 21 will not have the key to reset it. And one of the 22 main reasons for that is the production area that 23 is going to be manned 24/7 as these boilers are 24 being operated under the variance is a clean room. 25 And so going in and out of the clean room requires</p>	<p style="text-align: right;">Page 101</p> <p>1 a dressing out, so on and so forth. And so the 2 thought was instead of having the boiler 3 attendants actually have to go through the 4 process, just simply go reset with the key. We're 5 having -- a non-key e-stop, is, in essence, what 6 we're doing there. So you'll see that change on 7 page 3, 4, and 7. And that's just a simple 8 editorial. 9 Also, on page 5, there was -- the 10 systems that we actually use is not radio 11 communication. It's actually telephone 12 communication. So we have a dedicated phone 13 system that has that communication from the 14 process room, which is their remote station, over 15 to the boiler attendant itself. They do not use a 16 radio system. So it's a phone system. 17 If we will take a quick look over at 18 the site plan -- I do apologize. I kind of don't 19 know what happened with the blurriness there, but 20 it's nice and big, Mr. Baughman. 21 What we have -- as you can see, we 22 have the sterile processing room. That is a clean 23 room that I had mentioned. That is where your 24 remote panel is located. We have the two steam 25 generators and the feed tank in the boiler room</p>

<p style="text-align: right;">Page 102</p> <p>1 itself with e-stops at both pedestrian exits, as 2 you can see, local e-stops.</p> <p>3 CHAIRMAN MORELOCK: Mr. Toth, 4 what's the distance between the boiler and the --</p> <p>5 MR. TOTH: It's 115 feet.</p> <p>6 CHAIRMAN MORELOCK: Thank you, sir.</p> <p>7 MR. TOTH: We can't read that very 8 well, can we? It's actually on there, but it's 9 just -- yeah, it's a little blurred. I do 10 apologize for that. That will be corrected.</p> <p>11 And if we go to the equipment 12 information, you do see that all of the boilers 13 have received their registration numbers. These 14 are 150 psi steam generators, meaning they do not 15 have a fixed water level. So not having a fixed 16 water level, they do not have your standard 17 low-water cutoffs as you would see on your typical 18 fire-tube boiler or water-tube boiler. They are 19 completely full, and then the generation occurs 20 later on in the header or the steam release in the 21 header. They do have all the required controls. 22 They utilize the Siemens LME73 controller.</p> <p>23 One of the unique things, just as our 24 last client, Steris is very big on their safety 25 and their operation. They also understand the</p>	<p style="text-align: right;">Page 103</p> <p>1 importance of these units in their operation. 2 They're sterilizing. Okay? If they don't keep 3 their boilers up, don't keep them operating 4 properly, they're not running.</p> <p>5 One of the things that we've decided 6 to do is actually do a shift over from Boiler 1 to 7 Boiler 2, and vice versa, every eight hours. So 8 every eight hours those boilers are shifted 9 between each other. And during that process is a 10 complete safety check that goes on. So the 11 operator would actually take it through its 12 process of bringing it down, running through his 13 safety checks and ensuring that all the safety 14 checks are operational. And then the other boiler 15 is brought up.</p> <p>16 They also, because the steam 17 generators, they don't have very big tubes, if you 18 would, very small. They actually have a very 19 robust water softening system. To combat any 20 hardness in their water, they actually go through 21 twice. It goes through the initial softening 22 system and then carries over to another softening 23 system before it is entered into the deaerator. 24 The deaerator does have a sparse tube system where 25 they do send some steam through there. The steam</p>
<p style="text-align: right;">Page 104</p> <p>1 is just used to help heat the water up. It helps 2 to also release any trapped oxygens that may be in 3 that water, but it's completely vented to the 4 atmosphere, so there's no pressure on that unit at 5 all.</p> <p>6 A lot of safety features are in these 7 units that you can see through all the 8 information that I've provided.</p> <p>9 CHAIRMAN MORELOCK: A motion to 10 discuss?</p> <p>11 MR. BAUGHMAN: So moved.</p> <p>12 MR. FOX: Second.</p> <p>13 CHAIRMAN MORELOCK: Thank you. 14 Any conflicts of interest? 15 (No verbal response.)</p> <p>16 CHAIRMAN MORELOCK: All right. 17 There are none. 18 What questions do you have?</p> <p>19 MR. BAUGHMAN: Bruce, this is 20 directed towards yourself.</p> <p>21 MR. BOWEN: All right, sir.</p> <p>22 MR. BAUGHMAN: How familiar are you 23 with these pieces of equipment?</p> <p>24 MR. BOWEN: I have studied them 25 since they installed them. This is a new type,</p>	<p style="text-align: right;">Page 105</p> <p>1 and I have had training from MRG, the company that 2 installed them.</p> <p>3 MR. BAUGHMAN: Very good. Well, 4 they're a German unit. They're very much a 5 different unit, and so henceforth, my questions. 6 And you'll also be, I believe, in charge of the 7 training of personnel?</p> <p>8 MR. BOWEN: Yes, I will be in 9 charge of the training for the personnel.</p> <p>10 MR. BAUGHMAN: And to that, there 11 was a description in Section 3, page 5, Item 2A, 12 parentheses 1 that describes in the training of 13 personnel -- Section 3, page 5 -- that remote 14 attendants will be given a brief understanding for 15 the equipment being monitored. I wondered how 16 much "brief" actually is. And so part of it was 17 looking at your expertise since you're the one 18 that's going to be in charge of the training of 19 the operator personnel and the monitoring people, 20 was making sure that we felt good with the amount 21 of expertise that you had in these special pieces 22 of equipment, since they are very unique.</p> <p>23 MR. BOWEN: Okay. On the "brief" 24 description of the boilers, I will personally take 25 every attendant in there, describe the operation</p>

<p style="text-align: right;">Page 106</p> <p>1 of the boiler. And they already know the  2 importance of the boiler because we have to go  3 through a stringent training process for them to  4 become sterilizing technicians. So they know the  5 importance of the steam quality and steam level  6 already.</p> <p>7 MR. BAUGHMAN: Sure.</p> <p>8 MR. BOWEN: So for me to just go  9 and describe to them our process for making the  10 steam and then what their process is for shutting  11 the boiler down if there is a problem.</p> <p>12 MR. BAUGHMAN: Very good. I  13 appreciate that.</p> <p>14 MR. TOTH: If I may interject on  15 that. Steris is contracting with BTG to create a  16 program for them. It will be a train-the-trainer  17 type of a system. Again, we're referring to  18 remote attendants when we talk about it, as we do  19 with other clients that we have. It's an  20 understanding of what they're looking at. It's  21 not an in-depth, because they are remote  22 attendants. But instead of just teaching them  23 here is a panel, push a button, if you could push  24 this button, what does it affect.</p> <p>25 So there will be a program that is</p>	<p style="text-align: right;">Page 107</p> <p>1 custom built for Steris IMS, and it will be very  2 thorough.</p> <p>3 MR. BAUGHMAN: Good. And you've  4 had some training already through Maintenance  5 Resource Group.</p> <p>6 MR. BOWEN: Yes.</p> <p>7 MR. BAUGHMAN: Are these units  8 presently in operation?</p> <p>9 MR. BOWEN: Yes. They are under  10 the 20-minute rule.</p> <p>11 MR. BAUGHMAN: Very good. They're  12 classified as steam generators. So we hear a  13 term, "steam generator," and we hear a term,  14 "boiler," but they're two different things. And  15 so as we get to looking at this and the boiler  16 itself has the header, the steam portion, external  17 of the boiler itself, correct?</p> <p>18 MR. TOTH: (Nods head.)</p> <p>19 MR. BAUGHMAN: Okay. So being by  20 that definition --</p> <p>21 MR. BAILEY: I need a verbal  22 answer.</p> <p>23 MR. TOTH: Yes, it is.</p> <p>24 MR. BAUGHMAN: So by definition,  25 does this fall under our requirements --</p>
<p style="text-align: right;">Page 108</p> <p>1 MR. TOTH: Yes, it does.</p> <p>2 MR. BAUGHMAN: Okay. Because I  3 know we've looked at that through vapor units,  4 through Claytons and so forth, so that was where I  5 wanted to go back in and look. Because we talked  6 about this -- there was a project over in Lebanon.  7 I'm sorry.</p> <p>8 MR. ROBINSON: Mr. Baughman, you're  9 absolutely -- Gene Robinson, Cincinnati Insurance.  10 You're absolutely correct, Mr. Baughman. There  11 was a code case issued DC92-06. And I'll hand  12 that to Mr. Chairman and let him look it over  13 prior to...</p> <p>14 CHAIRMAN MORELOCK: (Reviews  15 document.) That's what Mr. Toth was speaking to.</p> <p>16 MR. BAUGHMAN: (Reviews document.)  17 Very good. That answers my question. Very good.</p> <p>18 CHAIRMAN MORELOCK: Thank you,  19 Mr. Robinson.</p> <p>20 MR. BAUGHMAN: So in this  21 terminology -- thank you very much, Mr. Robinson.  22 I appreciate that -- is making sure that  23 terminology is interchangeable. But in one place,  24 you do identify boiler, and then in parentheses,  25 steam generator. So as long as there's an</p>	<p style="text-align: right;">Page 109</p> <p>1 identification that one is the same as the  2 other...</p> <p>3 MR. TOTH: If I may. And that is  4 defined in the Glossary of Terms and in the Rules  5 and Regulations as well. Not under the glossary  6 terms of this. Even though in the industry it's a  7 steam generator, they're all boilers. They're all  8 classified as boilers, even in Section 1 of the  9 ASME code.</p> <p>10 MR. BAUGHMAN: A boiler -- and  11 we've talked about this before -- this has no  12 water sight glass.</p> <p>13 MR. TOTH: Fixed water level, yes.</p> <p>14 MR. BAUGHMAN: And a boiler, by  15 code, has to have a sight glass for water level;  16 whereas a steam generator does not. So there's  17 some differentiation between them.</p> <p>18 MR. TOTH: Mr. Baughman, I will  19 agree with you if we're talking Section 1 of the  20 ASME code. But we're referring to Tennessee rules  21 and regulations. Tennessee rules and regulations  22 define these as a boiler.</p> <p>23 MR. BAUGHMAN: Very good.</p> <p>24 MR. BOWERS: Are these S-stamped?</p> <p>25 MR. TOTH: Yes.</p>

<p style="text-align: right;">Page 110</p> <p>1 CHAIRMAN MORELOCK: Other 2 questions? Comments? 3 MR. BAUGHMAN: Where is -- so I had 4 a conflict in somewhat of a -- a little bit of a 5 contradiction. And it may be just myself and my 6 own understanding of the wording. But in 7 Appendix J, page 36, Number 12, we talk about the 8 boiler being checked every four hours. 9 MR. TOTH: I'm sorry, Mr. Baughman. 10 Which one? Page 36, which line? 11 MR. BAUGHMAN: We talked about the 12 boiler being checked every four hours. But the 13 wording in, I believe it's Section 3(a), page 9 -- 14 it might not be page 9 -- it says normal duties at 15 the beginning of their shift or at the eight-hour 16 manual cycling, whichever is less, the boiler 17 attendant will communicate with the remote 18 attendant. 19 So I wanted to make sure that that 20 wasn't construed as having that four-hour check, 21 because it speaks of the beginning of the shift or 22 the eight-hour manual cycling, whichever is less, 23 the attendant will communicate with -- the boiler 24 attendant will communicate with the remote 25 attendant their intention to test the alarms. But</p>	<p style="text-align: right;">Page 111</p> <p>1 I want to make sure that that wasn't misconstrued 2 as being in there every -- 3 MR. TOTH: No. No, it's not. I 4 know where you're going with that. That is 5 identified on page 8, paragraph 1(a). That shows 6 that we will do readings once every four hours. 7 But as I stipulated with Steris IMS going above 8 and beyond and want to ensure they're safe in 9 operation of their units, they are actually 10 switching them out every eight hours. 11 So when they switch them out, they 12 are also performing checks. So in doing so, those 13 checks will also signify an alarm back to the 14 panel. So again, it's at the beginning of the 15 shift or every eight hours, whichever is least. 16 So if the shifts run over, over an eight-hour 17 period, they're going to do it every eight hours. 18 MR. BAUGHMAN: Sure. I was just 19 wanting to make sure. And you'll do this through 20 your training, undoubtedly. I just didn't want my 21 misconceptions. Because it's under normal duties 22 and it specifies beginning of the shift or 23 eight hours versus just under boiler attendant and 24 then describing the four hours. But it was a bit 25 of a -- and it may be just my mind, but it was a</p>
<p style="text-align: right;">Page 112</p> <p>1 bit of a contradiction. But I know that will get 2 clarified in your operations. 3 MR. TOTH: It will. 4 MR. BAUGHMAN: I don't think it 5 needs to be attended to, actually, in the manual. 6 Another question I have is under 7 Appendix C, the fault code list. 8 MR. TOTH: Okay. 9 MR. BAUGHMAN: And I know these 10 boilers are operational already, so I guess I'll 11 point this back to Bruce. On page 16, you've got 12 a list of faults that enunciated and relayed 13 between the boiler burner controllers and the 14 remote alarm panel. How is the low water or 15 low-water condition faulted? 16 MR. BOWEN: The low-water condition 17 is we've got a temperature limiter and a pressure 18 limiter. So we monitor the temperature and the 19 pressure of the steam generator to determine our 20 water level in the generator. 21 MR. BAUGHMAN: Got you. So this is 22 a coil type of unit? 23 MR. BOWEN: Yes, it is. 24 MR. BAUGHMAN: Okay. And so that 25 monitoring, then, my question is, on the fault</p>	<p style="text-align: right;">Page 113</p> <p>1 list, how is that enunciated? 2 MR. BOWEN: Well, on this fault 3 list is to do with just the Siemens. Okay? We 4 have a main controller on the face of our unit 5 that will enunciate steam -- pressure limiter or 6 steam temperature limiter on the unit itself on 7 the nameplate -- I mean, on the face, on the 8 display unit. 9 This display is inside the cabinet, 10 these fault lists right here. So this is only for 11 whenever the display unit we want to investigate, 12 then we go into this to see what our problem was. 13 MR. BAUGHMAN: I got you. So they 14 both enunciate back to the remote panel. 15 MR. BOWEN: Yes. 16 MR. BAUGHMAN: Very good. Well, I 17 guess my confusion was it didn't -- that other 18 controller is not identified -- 19 MR. BOWEN: Yes. The other 20 controller is not identified in this book, but it 21 is in the training program. 22 MR. BAUGHMAN: Very good. 23 MR. TOTH: And, Mr. Baughman, if I 24 can allude to that. Because, as we know, a fault 25 list such as this is not a requirement of the</p>

<p style="text-align: right;">Page 114</p> <p>1 variance manual. It's just an additional add-in,  2 and it's also to assist for purposes of personnel,  3 so they have the manual there, they have a better  4 opportunity to pull up the fault list that comes  5 from the Siemens controller. So as Mr. Bowen had  6 mentioned, there is an additional HMI that the  7 Siemens controller is connected to that has those  8 same communications.  9 MR. BAUGHMAN: Very good.  10 CHAIRMAN MORELOCK: Any other  11 questions or comments?  12 (No verbal response.)  13 MR. ROBINSON: (Indicating.)  14 CHAIRMAN MORELOCK: Yes,  15 Mr. Robinson?  16 MR. ROBINSON: Eugene with  17 Cincinnati. What kind of valves are on this  18 boiler? Are they water valves or steam valves?  19 MR. TOTH: I'm sorry. What are you  20 referring to? Are you talking about safety  21 valves?  22 MR. ROBINSON: Yes, sir.  23 MR. TOTH: They're a -- I don't  24 know which manufacturer it is.  25 MR. BOWEN: I don't know the name</p>	<p style="text-align: right;">Page 115</p> <p>1 or brand.  2 MR. TOTH: I mean, I could probably  3 look up a photograph.  4 MR. ROBINSON: Are they steam or  5 water?  6 MR. TOTH: Oh, no, they're steam.  7 MR. ROBINSON: Okay.  8 MR. TOTH: They're steam valves.  9 But I do have photographs of that if you --  10 MR. ROBINSON: No. I've seen water  11 valves, because, again, this is water --  12 MR. TOTH: Not when it meets that  13 point. When it meets that point, it's not.  14 MR. ROBINSON: I have seen hot-  15 water-heating-boiler-type relief valve installed  16 on a hot water heating boiler.  17 MR. TOTH: Got you.  18 MR. ROBINSON: This is designated  19 as a steam generator.  20 MR. TOTH: Steam generator, yes.  21 CHAIRMAN MORELOCK: And it's  22 S-stamped, not a Section 4-stamped.  23 MR. ROBINSON: Right. Exactly.  24 Right. But still, I didn't know.  25 CHAIRMAN MORELOCK: Good question.</p>
<p style="text-align: right;">Page 116</p> <p>1 Any other questions or comments?  2 (No verbal response.)  3 CHAIRMAN MORELOCK: Hearing none,  4 I'm going to call the question to contingently  5 approve this variance based upon revisions to the  6 manual based on comments at the Tennessee Board  7 Meeting and a successful site visit from the  8 Boiler Unit.  9 MR. BOWERS: I make that motion.  10 CHAIRMAN MORELOCK: I have a  11 motion. Do I have a second?  12 MR. FOX: Second.  13 CHAIRMAN MORELOCK: I have a  14 second. Any other discussion?  15 (No verbal response.)  16 CHAIRMAN MORELOCK: Hearing none,  17 I'm going to call the question. All in favor say  18 aye.  19 (Affirmative response.)  20 CHAIRMAN MORELOCK: Opposed?  21 (No verbal response.)  22 CHAIRMAN MORELOCK: Abstentions,  23 not voting?  24 (No verbal response.)  25 CHAIRMAN MORELOCK: Gentlemen, you</p>	<p style="text-align: right;">Page 117</p> <p>1 have a contingently approved variance.  2 MR. TOTH: Thank you.  3 MR. BAUGHMAN: Mr. Robinson, thank  4 you again for bringing that information. That was  5 very helpful.  6 CHAIRMAN MORELOCK: Okay. Our next  7 item is 19-25, Clover Bottom Development Center.  8 And they're requesting a new variance for two  9 high-pressure boilers. Oh, I'm sorry. Correct  10 that. It is a modification of a variance for two  11 high-pressure boilers.  12 So introduce yourselves and present  13 your item.  14 MR. NEVILLE: James Neville with  15 Neville Engineering.  16 MR. VANSTONE: Blair Vanstone with  17 the State of Tennessee at Clover Bottom.  18 MR. NEVILLE: We're here to request  19 a modification to an existing variance. These  20 boilers previously had the Hawk ICS control  21 system. They have upgraded the controls on both  22 of these boilers to the Hawk 5000. We have stated  23 that in our Appendix A, as far as the remarks on  24 that. And in Appendix B, we've listed those new  25 controls with Hawk 5000 there.</p>

<p style="text-align: right;">Page 118</p> <p>1 As a part of this review, we've also 2 updated our job descriptions for those that will 3 be monitoring the boilers both remotely and in the 4 boiler room, boiler attendants.</p> <p>5 On page 5, we list the remote station 6 still as Security Guard 1 and Security Guard 2. 7 They are monitoring those boilers at the Harold 8 Jordan Center. This campus has multiple 9 buildings. I believe it's 23 buildings total. 10 And they are monitoring those boilers from the 11 Harold Jordan Center. And that's approximately 12 3,000 feet from this boiler room.</p> <p>13 As far as the ones that we're listing as 14 boiler attendants, we list those on page 7. And 15 there's a number there, and I'll read off those: 16 Boiler Operator Supervisor, Building Maintenance 17 Worker 2, Building Maintenance Worker 3, 18 Maintenance Carpenter 2, Facilities Manager 3, 19 Facilities Supervisor, and Security Guard 1 and 20 Security Guard 2.</p> <p>21 Now, Security Guard 1 and 2 would be 22 under monitoring duties only. They do not operate 23 the boiler.</p> <p>24 If there's any questions regarding this 25 variance...</p>	<p style="text-align: right;">Page 119</p> <p>1 CHAIRMAN MORELOCK: So do I have a 2 conflict for this variance? Any conflicts? 3 MR. FOX: I may have a conflict. 4 CHAIRMAN MORELOCK: Okay. 5 MR. FOX: I've done some work at 6 Clover Bottom in the past year. 7 MR. BAILEY: What kind, just repair 8 work? 9 MR. FOX: Yes, repair work. 10 MR. BAILEY: I don't know that that 11 is much of a conflict there. 12 MR. FOX: I didn't do anything 13 control-wise. 14 MR. BAILEY: And you weren't part 15 of setting it up or anything like that? 16 MR. FOX: No, sir. 17 MR. BAILEY: I don't think that's a 18 conflict to be concerned about. 19 CHAIRMAN MORELOCK: Okay. Thank 20 you for noting that. 21 Do I have a motion to discuss? 22 MR. BAUGHMAN: So moved. 23 CHAIRMAN MORELOCK: Second? 24 MR. BOWERS: Second. 25 CHAIRMAN MORELOCK: Okay. What</p>
<p style="text-align: right;">Page 120</p> <p>1 questions/comments do you have? I will say this, 2 before we get into this, if you look on page I-5, 3 you will see a revisions page. And the first 4 block, those first six items are comments that 5 were made during the December 16, 2015 meeting. 6 And this is just showing how those items have been 7 added to the manual. Then where it says 8 "Revisions," those are the revisions that they're 9 presenting here today. That may help you a little 10 bit as you --</p> <p>11 MR. BAUGHMAN: Where is that 12 located? 13 CHAIRMAN MORELOCK: It's in the 14 appendices, I-5, after the checklist. 15 So what questions/comments do you 16 have? 17 So I guess I have a question. As far 18 as training, who does your boiler training? 19 MR. VANSTONE: I do. 20 CHAIRMAN MORELOCK: Okay. All 21 right. Because I had read that Allied provided 22 boiler training. I wanted to make sure we didn't 23 have another conflict. 24 MR. VANSTONE: Allied Boiler trains 25 the security guards so that they are familiar with</p>	<p style="text-align: right;">Page 121</p> <p>1 the procedures, but they're not listed as 2 attendants. 3 CHAIRMAN MORELOCK: Okay. Very 4 good. 5 MR. BAUGHMAN: And just to clarify, 6 that's been a number of years ago that they came 7 through. 8 CHAIRMAN MORELOCK: Okay. 9 MR. VANSTONE: As they get new 10 hires, we're submitting them to go through the 11 training. 12 CHAIRMAN MORELOCK: Okay. Very 13 good. 14 I have an editorial correction, if 15 you look on page G-35. If you look at the bottom 16 under "Controlling Machines and Processes," Item 2 17 says, "Operate remote kill switch for boilers." 18 That's exactly what it is, but we typically call 19 that emergency shut down, an ESD. 20 MR. NEVILLE: We can change that. 21 CHAIRMAN MORELOCK: All right. 22 Thank you. 23 In reviewing the 2015 minutes, there 24 was a discussion that there was a potential name 25 change to -- that this would eventually become</p>

<p style="text-align: right;">Page 122</p> <p>1 Middle Tennessee Regional. I guess that's --</p> <p>2 MR. VANSTONE: That's its official</p> <p>3 name now. It's Middle Tennessee Regional Office</p> <p>4 of the Department of Intellectual and</p> <p>5 Developmental Disabilities.</p> <p>6 CHAIRMAN MORELOCK: Okay.</p> <p>7 MR. VANSTONE: Most people know it</p> <p>8 as Clover Bottom, and when I use the NITRO or DIDD,</p> <p>9 they don't know what I'm talking about. I say</p> <p>10 Clover Bottom, they know what I'm talking about.</p> <p>11 CHAIRMAN MORELOCK: Okay. All</p> <p>12 right. Thank you. That's all the questions I</p> <p>13 have. What questions does the board have?</p> <p>14 MR. BAUGHMAN: Where is the -- this</p> <p>15 question is directed to either one of you. But</p> <p>16 where are the e-stops located in the boiler room?</p> <p>17 MR. VANSTONE: Outside the main</p> <p>18 door and the side door.</p> <p>19 MR. BAUGHMAN: Very good.</p> <p>20 MR. VANSTONE: There's one for each</p> <p>21 boiler.</p> <p>22 MR. BAUGHMAN: Both of those being</p> <p>23 outside?</p> <p>24 MR. VANSTONE: Yes.</p> <p>25 MR. BAUGHMAN: With the diagram of</p>	<p style="text-align: right;">Page 123</p> <p>1 the -- this will be on -- it's identified as B-3.</p> <p>2 For the Boiler 1 and Boiler 2 Hawk systems, is</p> <p>3 there a reset available on the computer itself?</p> <p>4 In other words, do we have a reset available on</p> <p>5 the computer?</p> <p>6 MR. VANSTONE: The reset is on the</p> <p>7 control panel. We have a computer that just</p> <p>8 monitors it. That's going to be in the office.</p> <p>9 But the resets are on the boiler themselves --</p> <p>10 MR. BAUGHMAN: Very good.</p> <p>11 MR. VANSTONE: -- on the control</p> <p>12 panel.</p> <p>13 MR. BAUGHMAN: Excellent.</p> <p>14 CHAIRMAN MORELOCK: Any other</p> <p>15 questions or comments?</p> <p>16 I guess it's just a recommendation --</p> <p>17 it doesn't have to be done -- but on your</p> <p>18 organization chart in Appendix D, it would be</p> <p>19 helpful just to identify these personnel as either</p> <p>20 remote monitoring for boiler attendants or even</p> <p>21 like for the security guards, they're going to be</p> <p>22 boiler monitors as well.</p> <p>23 MR. NEVILLE: Right. Okay. We can</p> <p>24 add that.</p> <p>25 CHAIRMAN MORELOCK: Okay.</p>
<p style="text-align: right;">Page 124</p> <p>1 All right. Hearing none, I am going</p> <p>2 to seek a motion to approve this modification,</p> <p>3 based on the comments from the board to make</p> <p>4 revisions to the manual and a successful site</p> <p>5 visit from the boiler unit.</p> <p>6 MR. BOWERS: I make that motion.</p> <p>7 MR. BAUGHMAN: Second.</p> <p>8 CHAIRMAN MORELOCK: Any other</p> <p>9 discussion?</p> <p>10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: I'm going to</p> <p>12 call the question. All in favor say aye.</p> <p>13 (Affirmative response.)</p> <p>14 CHAIRMAN MORELOCK: Opposed?</p> <p>15 (No verbal response.)</p> <p>16 CHAIRMAN MORELOCK: Abstentions,</p> <p>17 not voting?</p> <p>18 (No verbal response.)</p> <p>19 CHAIRMAN MORELOCK: You have an</p> <p>20 approved modification to your variance.</p> <p>21 MR. NEVILLE: Thank you.</p> <p>22 MR. VANSTONE: Thank you.</p> <p>23 CHAIRMAN MORELOCK: All right. Our</p> <p>24 next item, Item 19-26 -- and correct me if I'm</p> <p>25 pronouncing this wrong -- is it Develey? Is that</p>	<p style="text-align: right;">Page 125</p> <p>1 correct?</p> <p>2 MR. COTTRELL: Develey.</p> <p>3 CHAIRMAN MORELOCK: Develey. Okay.</p> <p>4 So Develey Mustard and Condiments Corporation is</p> <p>5 requesting a variance for two high-pressure</p> <p>6 boilers. So introduce yourself and present your</p> <p>7 item.</p> <p>8 Are there any conflicts on this item?</p> <p>9 (No verbal response.)</p> <p>10 CHAIRMAN MORELOCK: Okay.</p> <p>11 MR. NEVILLE: James Neville with</p> <p>12 Neville Engineering.</p> <p>13 MR. COTTRELL: Phillip Cottrell</p> <p>14 with Develey Mustard and Condiments.</p> <p>15 MR. NEVILLE: Phillip, if you want</p> <p>16 to fill them in on what they produce at this</p> <p>17 point?</p> <p>18 MR. COTTRELL: Develey is the first</p> <p>19 manufacturer in the United States for the Develey</p> <p>20 Corporation, which has been operating since 1842.</p> <p>21 We're the 19th facility for the company which is</p> <p>22 private owned.</p> <p>23 We produce all types of condiments,</p> <p>24 mustard, ketchup, ranch dressings, all kinds of</p> <p>25 dressings, mostly for larger corporations and</p>

<p style="text-align: right;">Page 126</p> <p>1 larger retailers.</p> <p>2                   So that's basically it in a nutshell.</p> <p>3 We produce lots and lots of ketchup.</p> <p>4                   CHAIRMAN MORELOCK: Well, and just</p> <p>5 so you all know, the most important line in his</p> <p>6 introduction in the book is the fact that now we</p> <p>7 know where Big Macs get their special sauce.</p> <p>8                   MR. COTTRELL: That's right.</p> <p>9                   MR. NEVILLE: That's right.</p> <p>10                  CHAIRMAN MORELOCK: Okay. So</p> <p>11 continue.</p> <p>12                  MR. NEVILLE: Well, if I can direct</p> <p>13 your attention to page 2, we show the site plan</p> <p>14 and we show the location of the boiler room and</p> <p>15 the location of the remote station. It's</p> <p>16 approximately 285 feet from the boiler room.</p> <p>17                  The remote station will be</p> <p>18 continuously staffed by machine operators. They</p> <p>19 are operating the line there that we show on</p> <p>20 Site 1.</p> <p>21                  As far as the boiler attendants, the</p> <p>22 boiler attendants is -- a multi-craft maintenance</p> <p>23 technician is the title for the trained boiler</p> <p>24 attendant.</p> <p>25                  The two boilers that we show are</p>	<p style="text-align: right;">Page 127</p> <p>1 Sellers boilers. Those are fire tube and they</p> <p>2 have the Hawk 4000 control system. In Appendix B</p> <p>3 we list the Hawk 4000 equipment that will be</p> <p>4 monitoring that boiler. And also, in Appendix B,</p> <p>5 we show the emergency stops, and there's also an</p> <p>6 access control for the boiler room that you have</p> <p>7 to have a card key to access that boiler room.</p> <p>8                   Appendix C we list the fault codes.</p> <p>9                   And if there's any questions we can</p> <p>10 answer...</p> <p>11                  CHAIRMAN MORELOCK: Do I have a</p> <p>12 motion to discuss?</p> <p>13                  MR. FOX: So moved.</p> <p>14                  CHAIRMAN MORELOCK: Do I have a</p> <p>15 second?</p> <p>16                  MR. BOWERS: Second.</p> <p>17                  CHAIRMAN MORELOCK: What questions</p> <p>18 do you have?</p> <p>19                  MR. BAUGHMAN: Mr. Neville, on the</p> <p>20 DA sheet, this is a pressurized DA?</p> <p>21                  MR. NEVILLE: Low pressure, yes.</p> <p>22                  MR. BAUGHMAN: Low pressure. The</p> <p>23 design pressure is 50.</p> <p>24                  MR. NEVILLE: Yes.</p> <p>25                  CHAIRMAN MORELOCK: Yeah, but it's</p>
<p style="text-align: right;">Page 128</p> <p>1 operated at what, 5 to 7 or something?</p> <p>2                   MR. BAUGHMAN: Right.</p> <p>3                   MR. NEVILLE: Right. Operating at</p> <p>4 7. We can list the safety valve, would be the</p> <p>5 next thing, under 15 psi.</p> <p>6                   MR. BAUGHMAN: That was my</p> <p>7 question.</p> <p>8                   MR. NEVILLE: So we can list that</p> <p>9 as well.</p> <p>10                  MR. BAUGHMAN: Yes. We have no</p> <p>11 Tennessee number and no NB number, which would be</p> <p>12 a requirement, if I'm not mistaken, being the</p> <p>13 design pressure is 50 even though it's operating</p> <p>14 below 15 psi. The build itself is above 15 psi.</p> <p>15 Am I correct?</p> <p>16                  CHAIRMAN MORELOCK: Yes. But if</p> <p>17 you operate it and relieve it at less than 15, it</p> <p>18 does not have to be -- you're operating it below</p> <p>19 the requirements of the State of Tennessee.</p> <p>20                  MR. BAUGHMAN: Yes. But it's still</p> <p>21 through the build, is what I'm saying, as we have</p> <p>22 no NP number.</p> <p>23                  CHAIRMAN MORELOCK: Oh, yes, yes,</p> <p>24 yes. As far as --</p> <p>25                  MR. BAUGHMAN: And we have no</p>	<p style="text-align: right;">Page 129</p> <p>1 Tennessee number, so...</p> <p>2                   CHAIRMAN MORELOCK: Yeah. Whoever</p> <p>3 stamped it, yes, you're correct.</p> <p>4                   MR. BAUGHMAN: So I would like to</p> <p>5 just have that for the record. And it does still</p> <p>6 need to have a Tennessee number assigned to it,</p> <p>7 even if it's low pressure; is that correct?</p> <p>8                   MR. TOTH: Marty Toth, ECS. It</p> <p>9 actually does, because if not, no deaerator</p> <p>10 operated in the state of Tennessee would have a</p> <p>11 registration, because no deaerator operates above</p> <p>12 15 psi. So it does require it to be registered</p> <p>13 and inspected.</p> <p>14                  MR. BAUGHMAN: Yeah. No different</p> <p>15 than if a high-pressure boiler was operating down</p> <p>16 in a low-pressure range. We still have to -- so</p> <p>17 we need both a Tennessee number and an NB number</p> <p>18 for the manual.</p> <p>19                  MR. TOTH: Mr. Chairman, may I</p> <p>20 interject?</p> <p>21                  CHAIRMAN MORELOCK: Yes.</p> <p>22                  MR. TOTH: Just to be perfectly</p> <p>23 clear, I know it's a request, but is deaerator</p> <p>24 information actually a requirement within the</p> <p>25 variance?</p>

<p style="text-align: right;">Page 130</p> <p>1 CHAIRMAN MORELOCK: It is not.</p> <p>2 MR. TOTH: Okay. I just wanted to</p> <p>3 make sure. Thank you.</p> <p>4 CHAIRMAN MORELOCK: Any questions</p> <p>5 or comments?</p> <p>6 MR. FOX: Yeah, I've got one.</p> <p>7 CHAIRMAN MORELOCK: Okay.</p> <p>8 MR. FOX: Mr. Neville, in your</p> <p>9 manual, I'm not seeing a written description nor a</p> <p>10 picture of the remote shut-off panel or how it</p> <p>11 actually operates. I mean, is it...</p> <p>12 MR. NEVILLE: We can take a picture</p> <p>13 of it and add that to the manual.</p> <p>14 MR. FOX: Okay. I was just curious</p> <p>15 if the stop button was a mushroom-type switch or</p> <p>16 what.</p> <p>17 MR. NEVILLE: It is. We list -- on</p> <p>18 B-2 we talk about the hardwired circuit for each</p> <p>19 boiler, but we don't give any details on that.</p> <p>20 But we can add a picture of the e-stop button.</p> <p>21 MR. BAUGHMAN: What type of</p> <p>22 water-level controls do you have on the boiler?</p> <p>23 MR. COTTRELL: It's got a float</p> <p>24 water level --</p> <p>25 MR. BAUGHMAN: The standard</p>	<p style="text-align: right;">Page 131</p> <p>1 McDonnell &amp; Miller?</p> <p>2 MR. COTTRELL: Yes.</p> <p>3 MR. BAUGHMAN: Well, I knew it had</p> <p>4 been -- the controls have been upgraded --</p> <p>5 MR. COTTRELL: The controls were</p> <p>6 upgraded to the Hawk. All the safeties were left</p> <p>7 the same and integrated into the Hawk system with</p> <p>8 the exception of the fire. And they had to add a</p> <p>9 new sensor to it because the Hawk wouldn't</p> <p>10 recognize those Sellers. So we had to go through</p> <p>11 Sellers. That was one of the reasons it took us</p> <p>12 so long to get it incorporated in, is we had to</p> <p>13 get approval from Sellers to do that.</p> <p>14 MR. BAUGHMAN: Sure. Because their</p> <p>15 UL listing --</p> <p>16 MR. COTTRELL: So we got all that</p> <p>17 done.</p> <p>18 MR. BAUGHMAN: Correct. There's</p> <p>19 actually an issue with the Sellers. And the Hawk</p> <p>20 probably took care of this, but one of the things</p> <p>21 they do -- and we've worked on quite a few of</p> <p>22 these interesting single-pass boilers -- it's got</p> <p>23 that big explosion relief door on the back of it,</p> <p>24 which is kind of an interesting nomenclature.</p> <p>25 It's an explosion relief door that's rather large.</p>
<p style="text-align: right;">Page 132</p> <p>1 But Sellers has the ability to leave</p> <p>2 the pilot on during the off cycle. And by CSD-1</p> <p>3 ASME, that's not allowed on a forced draft boiler.</p> <p>4 Within an atmospheric, you can have a standing</p> <p>5 pilot, but a forced draft you can't. And we've</p> <p>6 discussed that before, but I thought that was an</p> <p>7 interesting thing within Sellers' firing mechanism</p> <p>8 itself.</p> <p>9 The change to the Hawk, I don't</p> <p>10 believe they can do that. I don't believe they</p> <p>11 can --</p> <p>12 MR. COTTRELL: No, they can't do</p> <p>13 that. That was one of the issues that we ran</p> <p>14 into, is that they wanted to keep the Flame, and</p> <p>15 the Hawk didn't want to see -- it was -- it took</p> <p>16 us about the month, month and a half, to get it</p> <p>17 approved through Sellers to make all those changes</p> <p>18 and put the new sensors in. So yeah, it took a</p> <p>19 little convincing to get it all done.</p> <p>20 MR. BAUGHMAN: Absolutely.</p> <p>21 That's all the questions I've got.</p> <p>22 Everything else is just operational, but it</p> <p>23 doesn't apply to the variance.</p> <p>24 DR. HARGROVE: Question on B-3,</p> <p>25 just for clarification. And I commend Neville</p>	<p style="text-align: right;">Page 133</p> <p>1 Engineering for sharing one of the very few photos</p> <p>2 in the report that shows there actually is an</p> <p>3 e-stop button there.</p> <p>4 The photo on the left, is that a card</p> <p>5 reader to the left?</p> <p>6 MR. NEVILLE: It is. It's an</p> <p>7 access control, so they have to have a card to</p> <p>8 gain access into the boiler room. That's outside</p> <p>9 the boiler room.</p> <p>10 If you look on E-2, it may show you</p> <p>11 where that switch is, that emergency boiler stop</p> <p>12 switch. At the top of the sheet is where the --</p> <p>13 the door is. That's the first picture. And the</p> <p>14 second picture is down at the bottom.</p> <p>15 MR. COTTRELL: Being a foods fit</p> <p>16 facility, just about all our doors in the plant</p> <p>17 are key access. And your key only gets you into</p> <p>18 certain parts of the plant, according to what</p> <p>19 you're about to get into. And so food safety</p> <p>20 aspect and safety overall aspect.</p> <p>21 DR. HARGROVE: That's a good safety</p> <p>22 factor. Thank you.</p> <p>23 MR. BAUGHMAN: Well, and that</p> <p>24 brings up, though, that should there be a failure</p> <p>25 of the hardware of the key reader, the one e-stop</p>

<p style="text-align: right;">Page 134</p> <p>1 is outside of the door, and the other one is on  2 the inside on the opposite side of the room  3 itself. And if there should be a failure, there's  4 no way to get into that door to activate the  5 e-stop from that side. And not that that's part  6 of our variance by any stretch. I'm just --  7 MR. COTTRELL: The door is also  8 keyed with a master key. Management can get into  9 them. So myself and all the other managers and  10 plant manager can get into those doors, along with  11 my planner. And all the doors are keyed  12 individually so that you can only get into certain  13 doors of the plant, like myself and my maintenance  14 planner can get into the maintenance side of  15 everything, the electrical room, in case of power  16 failure or any kind of a glitch. But anybody else  17 wouldn't have access to it. My rounds men and my  18 technicians will have access to the boiler room.  19 MR. BAUGHMAN: Very good. Thank  20 you.  21 CHAIRMAN MORELOCK: Any other  22 questions or commitments?  23 (No verbal response.)  24 CHAIRMAN MORELOCK: Do I have a  25 motion to contingently approve this modification</p>	<p style="text-align: right;">Page 135</p> <p>1 to this variance based on the revisions from this  2 board as well as a successful site visit from the  3 boiler unit.  4 MR. FOX: I'll make that motion.  5 MR. BAUGHMAN: Second.  6 CHAIRMAN MORELOCK: Okay. Any  7 other questions or comments?  8 (No verbal response.)  9 CHAIRMAN MORELOCK: Okay. Hearing  10 none, all in favor say aye.  11 (Affirmative response.)  12 CHAIRMAN MORELOCK: Opposed?  13 (No verbal response.)  14 CHAIRMAN MORELOCK: Abstentions,  15 not voting?  16 (No verbal response.)  17 MR. BOWERS: Gentlemen, you have a  18 contingently approved variance.  19 MR. NEVILLE: Thank you.  20 MR. COTTRELL: Thank you.  21 CHAIRMAN MORELOCK: That takes up  22 us to Item 19-28, TAMKO Building Products.  23 MR. HUDGINS: I'm Ernie Hudgins  24 with Engineering Services Group. Beside me is  25 Kevin Jones.</p>
<p style="text-align: right;">Page 136</p> <p>1 MR. JONES: Kevin Jones, TAMKO  2 Building Products.  3 CHAIRMAN MORELOCK: Are there any  4 conflicts on this item?  5 (No verbal response.)  6 CHAIRMAN MORELOCK: All right.  7 Hearing none, you can proceed.  8 MR. HUDGINS: TAMKO Building  9 Products is located in Knoxville. They're been in  10 business since about 1944 making building/roofing  11 products.  12 Currently, the plant is operating two  13 high-pressure boilers. Their boilers operate  14 24/7. Typically, the plant only operates one  15 boiler at a time, but they can operate two of  16 them.  17 Boiler 1 was their original, primary  18 boiler. It was installed -- well, upgraded in  19 2002. In, I think, 2012, 2013, we applied for a  20 variance for Boiler 1 and it was granted. It's  21 gone through one renewal process.  22 Recently, the plant installed a  23 second high-pressure boiler. The addition started  24 in about 2018, and it is has recently been online.  25 It's been approved by the City of Knoxville, the</p>	<p style="text-align: right;">Page 137</p> <p>1 Tennessee Boiler and the air pollution.  2 The original boiler still has its  3 Honeywell 7800. The new boiler that was recently  4 installed is a Honeywell slate system.  5 If you look on SK-1, that's the site  6 plan. That distance from the boiler plant to the  7 remote station is about 500 feet. If you would  8 like, I can put a scale or write on that.  9 CHAIRMAN MORELOCK: If you could  10 just note that's 500 feet, that would be very  11 good.  12 MR. HUDGINS: SK-2 shows just a  13 schematic of the boiler plant itself. The old  14 original TAMKO plant was a coal-fired plant. All  15 of that equipment has been decommissioned. The  16 boilers are still in place.  17 Originally, when -- Boiler 1 is on  18 the left -- I'll add that to it, Boiler 1 and  19 Boiler 2 -- the controls and burner were interior  20 to the building. The back of the boiler was  21 exposed to the elements.  22 As part of the addition to the  23 boiler, installation of Boiler 2, the -- both  24 boilers were enclosed by -- according to the City  25 of Knoxville, the shed is what they gave them a</p>

<p style="text-align: right;">Page 138</p> <p>1 permit to build there.</p> <p>2 SK-2 shows the emergency shutdown</p> <p>3 stations that are existing. When Boiler 2 was</p> <p>4 added, the shutdown buttons were added to the</p> <p>5 existing shutdown stations. The one on the</p> <p>6 emergency shutdown station in front of the boiler</p> <p>7 addition is shown there by the door. Kevin</p> <p>8 brought it to my attention, it's actually on the</p> <p>9 corner of the building.</p> <p>10 MR. JONES: Actually, the door has</p> <p>11 moved and the station moved with it.</p> <p>12 MR. HUDGINS: So we'll fix that on</p> <p>13 there.</p> <p>14 SK-3 is a schematic panel layout for</p> <p>15 the remote panel that's in the control room. And</p> <p>16 then the SK-4, just a schematic of the steam and</p> <p>17 deaerator system. I had intended to get a data</p> <p>18 sheet for the deaerator in the variance along with</p> <p>19 the boilers, but it fell through the cracks.</p> <p>20 A. I had tried to get it -- a photograph of</p> <p>21 the name plate to present to you today, but the</p> <p>22 photograph did not come out. It was not readable,</p> <p>23 so we'll have to do a little more additional work</p> <p>24 on getting that.</p> <p>25 The data sheets for the boiler are</p>	<p style="text-align: right;">Page 139</p> <p>1 included, Appendix A. Boiler 1 is a Murray.</p> <p>2 Boiler 2 is a Cleaver-Brooks. 1969 and 1976</p> <p>3 vintages.</p> <p>4 As mentioned earlier, Boiler 1 is</p> <p>5 natural dual fuel; Boiler Number 2 is natural gas</p> <p>6 only.</p> <p>7 As part of the addition of Boiler 2, the</p> <p>8 relief valves on Boiler 1 will change to 300 psi</p> <p>9 so both boilers, the relief valves are the same</p> <p>10 settings.</p> <p>11 As far as plant personnel, nothing has</p> <p>12 changed since the request of the variance in 2012.</p> <p>13 All the boiler attendants are maintenance</p> <p>14 personnel. There's no janitorial staff nor</p> <p>15 security guards being used to monitor the boiler.</p> <p>16 The plant runs a 12-hour shift and logs</p> <p>17 are to be taken at four-hour intervals on our</p> <p>18 boiler log. We have an individual log for each</p> <p>19 boiler since it's possible that Boiler 1 would be</p> <p>20 off and Boiler 2 would be running and vice versa.</p> <p>21 On there, there is a column to indicate that the</p> <p>22 water column has been checked.</p> <p>23 Employee descriptions are included in</p> <p>24 the back. They're basically the shift supervisor,</p> <p>25 who is the remote station monitor, and a mechanic,</p>
<p style="text-align: right;">Page 140</p> <p>1 who is the boiler attendant.</p> <p>2 Kevin is the plant engineer. He's</p> <p>3 responsible for the training as stated in the</p> <p>4 manual.</p> <p>5 CHAIRMAN MORELOCK: Do I have a</p> <p>6 motion to discuss?</p> <p>7 MR. BOWERS: Motion to discuss.</p> <p>8 CHAIRMAN MORELOCK: Second?</p> <p>9 MR. FOX: Second.</p> <p>10 CHAIRMAN MORELOCK: What questions</p> <p>11 do you have?</p> <p>12 MR. BOWERS: One question I have is</p> <p>13 on Appendix A -- and maybe I'm looking at this</p> <p>14 wrong -- but you talked about on these -- the</p> <p>15 Cleaver-Brooks boiler, the MAWP is 260, and the</p> <p>16 safety valve is 300. So we have a discrepancy</p> <p>17 there; either you've got the wrong MAWP or we've</p> <p>18 got the wrong safety valve on the boiler.</p> <p>19 MR. HUDGINS: I would say we've got</p> <p>20 the wrong MAWP. It's a typo.</p> <p>21 MR. BOWERS: Okay. Can you</p> <p>22 double-check that?</p> <p>23 MR. HUDGINS: We will doublecheck</p> <p>24 that. Like I said --</p> <p>25 MR. BOWERS: Yeah, what concerned</p>	<p style="text-align: right;">Page 141</p> <p>1 me with these boilers and a variance of boilers</p> <p>2 this old, there's so much that can go wrong with</p> <p>3 these things. You know, it's like you've got a</p> <p>4 lot of thinning shell and things like that, over</p> <p>5 the years, and you're only looking at them every</p> <p>6 four hours.</p> <p>7 But you said on Boiler Number 1, that</p> <p>8 you actually went through that boiler some years</p> <p>9 ago?</p> <p>10 MR. HUDGINS: Yes.</p> <p>11 MR. BOWERS: Was the shell ever</p> <p>12 checked, the thickness of the shell looked at?</p> <p>13 MR. JONES: In -- I forget the</p> <p>14 exact year -- '94, '95, it was completely retubed</p> <p>15 and completely reshelled at that time. We have</p> <p>16 had various NDT testing from the boiler tubes</p> <p>17 periodically from them -- or from that point.</p> <p>18 CHAIRMAN MORELOCK: Any other</p> <p>19 questions or comments?</p> <p>20 MR. BAUGHMAN: Well, I'm looking</p> <p>21 at -- I see under the equipment description the</p> <p>22 7800, being on the Coen burner, has been -- the</p> <p>23 Coen had a 7800 programmer put on it. But I don't</p> <p>24 see any information on the PLC base control</p> <p>25 system. So I've got the programmer info, but I'm</p>

<p style="text-align: right;">Page 142</p> <p>1 not seeing a lot of delineation on the control 2 system itself. So, there again, I take it it's 3 the Coen burner, a great burner and the 4 programmer, but just lacking in a little bit of 5 information on that end of it. 6                   The Honeywell Slate has been added, 7 but -- 8                   MR. HUDGINS: To Boiler 2. 9                   MR. BAUGHMAN: I'm sorry? 10                  MR. HUDGINS: Just to Boiler 2. 11                  MR. BAUGHMAN: Yes. Honeywell 12 Slate has been added to Boiler 2. But just so you 13 know, there's real issues within Honeywell in the 14 industry right now that we're all encountering. 15 Honeywell control links has been taken off the 16 market and Slate has been introduced. But 17 Honeywell is kind of in a precarious position 18 right now as far as their controls division is 19 concerned. It is what you've got, and you've put 20 it on there, but there may be an equipment 21 revision coming up if they go a different route. 22                  Again, it doesn't apply to the 23 variance, but the drawing of the feedwater system, 24 the DA, I don't know what it's rated for. And it 25 shows that we've got 15 psi coming into it. I</p>	<p style="text-align: right;">Page 143</p> <p>1 take it there's got to be another regulator up 2 ahead of that because we're going 15 psi through 3 another regulator. I'm anticipating dropping down 4 to a lower pressure. But it's got a full bypass 5 around the regulator, which means when the 6 regulator fails, you can run full pressure to it. 7 And I'm interested to know where that 15 psi steam 8 comes from. 9                   The four-inch vent through the roof 10 shows a valve on it. I'm taking it that's an 11 orificed valve, a shut-off valve. But it shows an 12 overflow coming off the top of the DA with a 13 shut-off valve, and there has to be, by code, an 14 overflow going to a dump valve, but there's not 15 typically a shut-off valve in that either. But 16 can be. The overflow comes off the top of that 17 DA. 18                  So I'm just -- again, it doesn't 19 pertain to the variance. I'm just interested from 20 an equipment standpoint, making sure that 21 everything is proper. And that goes back to the 22 inspectors looking at the stuff also. 23                  CHAIRMAN MORELOCK: So just to add 24 to that comment, on SK-2, next to the DA, you've 25 got three feedwater pumps, correct?</p>
<p style="text-align: right;">Page 144</p> <p>1                   MR. JONES: That's correct. 2                   CHAIRMAN MORELOCK: So are they 3 FWP 1, 2, and 3? Because they're all shown at the 4 same number. 5                   MR. JONES: Yes, they are. 6                   CHAIRMAN MORELOCK: Okay. And the 7 labeling that Mr. Hudgins already alluded to to 8 update that sketch a little bit. 9                   What other questions? 10                  I've got a basic one. As far as the 11 rule that is referenced -- it's just a typo -- but 12 it needs to be -08(11) instead of -04(11). And 13 you'll need to fix that on the cover letter, the 14 cover page, page 8 and page 10 to get your correct 15 rule number for the 20-minute rule. 16                  So on page 5, we state that the 17 remote monitors is from plant operators, correct? 18                  MR. JONES: That's correct. 19                  CHAIRMAN MORELOCK: I could not 20 find a job description for them in Appendix G. I 21 found the boiler attendant. But the only job 22 description is for the shift supervisor, a 23 mechanics tech, but there's nothing for a plant 24 operator. 25                  MR. HUDGINS: It should be shift</p>	<p style="text-align: right;">Page 145</p> <p>1 supervisor. 2                   MR. JONES: Yes. 3                   CHAIRMAN MORELOCK: It should be 4 shift supervisor? Okay. So you can revise page 5 5 to make that shift supervisor? 6                   MR. HUDGINS: Yes. 7                   MR. JONES: Yes. 8                   CHAIRMAN MORELOCK: Okay. That's 9 all I had. 10                  What other questions/comments do you 11 have? 12                  (No verbal response.) 13                  CHAIRMAN MORELOCK: Hearing none, 14 do I have a motion to contingently approve this 15 variance based on revisions to the manual from 16 board member comments and a successful site visit 17 by the Boiler Unit. 18                  MR. BOWERS: I motion. 19                  CHAIRMAN MORELOCK: Okay. Do I 20 have a second? 21                  MR. FOX: Second. 22                  CHAIRMAN MORELOCK: I've got a 23 second. Any more discussion? 24                  (No verbal response.) 25                  CHAIRMAN MORELOCK: Okay. I'm</p>

<p style="text-align: right;">Page 146</p> <p>1 going to call the question. All in favor say aye.  2 (Affirmative response.)  3 CHAIRMAN MORELOCK: Opposed?  4 (No verbal response.)  5 CHAIRMAN MORELOCK: Abstentions,  6 not voting?  7 (No verbal response.)  8 CHAIRMAN MORELOCK: Gentlemen, you  9 have a contingently approved variance.  10 MR. HUDGINS: And thank you for  11 adding us to the agenda this month. Even though  12 we were last, it sounds like it's going to be  13 better being here in December than in March when  14 everybody is here mad about fee increases.  15 (Laughter.)  16 CHAIRMAN MORELOCK: You may be  17 right about that.  18 Okay. That completes new business.  19 Let's take a five-minute break and come back and  20 we'll work on Section 9.  21 (Recess observed.)  22 CHAIRMAN MORELOCK: We're at Item  23 Number 9, Rule Case and Interpretations. Our  24 first one is BI 19-01, Inquiry 5. And Mr. Toth is  25 going to present that.</p>	<p style="text-align: right;">Page 147</p> <p>1 MR. TOTH: Thank you, Mr. Chairman  2 and members of the board. Again, this is just a  3 follow-up to what was discussed or started at the  4 September meeting. As you may recall, there was  5 one inquiry that was tabled and one inquiry that  6 was removed. All the board members should have a  7 revised copy with the changes to the other  8 inquiries, the other seven inquiries. And I would  9 ask if the board has any questions for inquiries  10 and replies 1, 2, 3, 4, 6, and 7 before we move  11 forward.  12 CHAIRMAN MORELOCK: Mr. Toth, all I  13 have is 19-01, Inquiry 5.  14 MS. BENNETT: It's in your book.  15 MR. BOWERS: Is that the one dated  16 November 18?  17 MR. TOTH: No. I've got revised  18 November 20, 2019.  19 MR. BAUGHMAN: That November 20,  20 2019, it says Subject: Low Pressure. Is that  21 correct?  22 MR. TOTH: No. There was a number  23 of them. This one, you should have received the  24 letter --  25 CHAIRMAN MORELOCK: Okay. I've got</p>
<p style="text-align: right;">Page 148</p> <p>1 it. Yeah, I've got it.  2 MR. TOTH: -- the letter that was  3 originally dated for August 2nd. And then it has  4 a revised date next to it.  5 CHAIRMAN MORELOCK: Yes. All  6 right. I do have it.  7 MR. TOTH: On those inquiries and  8 replies that I mentioned in that letter, I did not  9 indicate the changes. I went by the changes that  10 were highlighted in the minutes and revised  11 accordingly. Those, I may add, were voted on and  12 approved by this body at the September meeting.  13 But complete approval of the interpretation was to  14 wait until after additional discussions.  15 MR. BOWERS: Let's go back through  16 those again, which ones we're talking about now.  17 We have one that's a letter dated November 15. I  18 have an old one that I had the last time dated  19 November 19. And this is -- and the first  20 question was -- okay. So that's on the CO2  21 monitors there. That's another question.  22 MS. BENNETT: It should be in your  23 book, Mr. Bowers.  24 MR. TOTH: If I may, I can just  25 come up and show you. I don't have a hard copy.</p>	<p style="text-align: right;">Page 149</p> <p>1 I've got the computer. If you'll notice, you'll  2 see it has the revision. It's the August 2nd with  3 the revision date. Does everybody see that?  4 MR. BOWERS: You said August 2nd  5 date got revised?  6 MR. TOTH: Uh-huh. Does everyone  7 have it?  8 CHAIRMAN MORELOCK: Yes.  9 MR. TOTH: So I'll reiterate. The  10 replies for 1, 2, 3, 4, 6, 7, and 8 have all been  11 revised per the request of the board and voted and  12 passed on at the last meeting. There was also  13 discussion that removed Inquiry Number 9. That  14 was added into interpretation requests for  15 low-pressure boilers. That apparently will be  16 brought up at the March meeting, since it was not  17 put on this agenda. And so the discussion we have  18 today to finalize this is Inquiry Number 5 and its  19 reply. And when the board is ready, I'll be happy  20 to read that with the suggested reply, and we can  21 go from there.  22 MR. BOWERS: Number 5. I'm waiting  23 on the direction of the Chair. What would you  24 like me to do, sir?  25 CHAIRMAN MORELOCK: Proceed.</p>

<p style="text-align: right;">Page 150</p> <p>1 MR. TOTH: Thank you. So as we  2 look at Inquiry Number 5, as read, it is required  3 for all high-pressure boilers installed in a  4 location -- example, boiler room, mechanical room,  5 facility location, et cetera -- to be electrically  6 connected to a single manually operated remote  7 shut-down switch, that is an e-stop, installed at  8 the point/points of egress where the activation of  9 the switch shall actuate the master fuel trip  10 relays on all boilers within the location.  11 The suggested reply is no. However,  12 this does not restrict the owner-user from doing  13 so if they choose. And I will add, this follows  14 the requirements within CSD-1, NFP85, and also  15 NBIC.  16 MR. BOWERS: The discussion was one  17 e-stop were all the boilers, which is going beyond  18 what the NBIC required. And I can say -- and I  19 think in probably 95 percent -- in talking to the  20 chief and assistant chief, 95 percent of the  21 times, that would be adequate. But there's  22 certain manufacturing plants that, probably, that  23 would not be -- work very well to do that.  24 So I guess that's the thing we have  25 to decide, if one fits all, or if there's a way to</p>	<p style="text-align: right;">Page 151</p> <p>1 say yes -- a way to say, well, we're going to do  2 this, and 95 percent -- but if you want to go  3 beyond that for a special plant, that we need to  4 have a way that we can -- to address that.  5 MR. FOX: Since this is open for  6 discussion, one thing I would point out, we  7 approved a variance for a customer here just a few  8 moments ago that's got five boilers. He's got  9 five e-stops. All right? If you're running out  10 of that boiler room or you're coming into that  11 boiler room to hit an e-stop, how do you know  12 which boiler is in alarm just by a mushroom  13 switch? You don't. You don't know which button  14 to hit.  15 So I'm looking at it if you have one  16 e-stop that controlled all five of the units, you  17 shut all five of them down at the same time, then  18 you could investigate. It wouldn't be that hard  19 to bring that boiler -- whichever boiler is in  20 failure or has a problem, it wouldn't take that  21 long, should not take that long to bring that  22 boiler back and put it right back online, or put  23 the other boilers online, I should say.  24 MR. BOWERS: And I would say  25 95 percent of the time, it would probably be like</p>
<p style="text-align: right;">Page 152</p> <p>1 that. There's probably certain situations,  2 certain plants that are a lot more sophisticated  3 that would need to, like Eastman, have to be  4 separated, where you don't have to go to that  5 degree. You need to have it where you can  6 individually shut down -- because you could talk  7 about -- I mean, we're talking about safety, but  8 we're talking about the clients, talking about the  9 locations, shutting down five big call units or  10 something like that in certain places, costs  11 millions and millions of dollars of damage to the  12 equipment if it's not shut individually.  13 MR. BAUGHMAN: So that was one of  14 the things that we had in our previous discussion,  15 was it's not a one-size-fits-all proposition. You  16 mentioned it in your discussion earlier that you  17 agreed it was a safer way to do it.  18 MR. TOTH: Well, I think it's --  19 Mr. Baughman, if I can interject, before you go  20 on, I agree 100 percent with Mr. Fox on this. If  21 I were to suggest to a client about e-stops, I'm  22 helping them as their consultant on two fronts.  23 Number one, they're still being safe because  24 they're following the rules and regulations and  25 the codes. But then, also, for a cost, they're</p>	<p style="text-align: right;">Page 153</p> <p>1 running less wire, less e-stops, less  2 opportunities. Absolutely.  3 The issue that I run into, as being  4 somebody that's served on codes for years, is that  5 concern of setting the requirements, such as the  6 NBIC has done, which Mr. Morelock and I are going  7 to be a part of next month. Where they're setting  8 requirements that are using words like "shall,"  9 that it's a one fits all, but in reality, that's  10 not realistic.  11 So I think, you know, there is an  12 opportunity here. There is an opportunity to  13 either address this as the exception or the rule.  14 The exception may be the Eastman Chemical  15 companies, the Parkwest Medical Centers. Those  16 companies that need or want to have the ability to  17 have multiple e-stops, and train accordingly, and  18 address that, how do we address that? The good  19 thing about it, the State of Tennessee does have a  20 permitting requirement where all state inspectors  21 are doing the first inspection. So they're able  22 to look at those things, such as e-stops, that we  23 talked about in September, that were hard to  24 enforce prior to the permitting requirements.  25 If this body chooses to use that as</p>

<p style="text-align: right;">Page 154</p> <p>1 an avenue for a variance, if you say you have to  2 have one that controls all boilers but the  3 individual location, if they choose to have  4 multiple e-stops, that's their purview, because  5 they are following the nationally recognized codes  6 when it comes to e-stop requirements.  7           But I do agree with Mr. Fox and  8 Mr. Baughman and everyone else, that one e-stop is  9 the best way to go, but that's not the only way to  10 go.  11           CHAIRMAN MORELOCK: Well, and this  12 inquiry, the way it's written, would allow you to  13 have that one e-stop. I mean it's not prohibiting  14 you from doing it, because, like you said, there  15 is a cost savings from installation, maintenance,  16 use, and all that. But then for folks like  17 Eastman, it doesn't tie our hands to have to --  18 there's no way we could put a -- you know, it  19 would cripple us if we had to do that.  20           MR. FOX: Oh, yeah.  21           MR. BAUGHMAN: Well, the other side  22 of the coin -- I'm sorry. Go ahead, Terry.  23           MR. FOX: I mean, there could be  24 some stuff done with the e-stop itself, the  25 push-button-type switch. Simply, if you had --</p>	<p style="text-align: right;">Page 155</p> <p>1 I'm trying to figure this out -- if you had an  2 alarm-type system with that boiler that would  3 indicate five light, or whatever, at the e-stop  4 itself, we might -- do you see what I'm saying?  5           MR. BOWERS: Which boiler?  6           MR. FOX: It would indicate which  7 e-stop you would want to hit.  8           CHAIRMAN MORELOCK: Right.  9           MR. FOX: You know, because I know  10 myself, if I've got something that's blowing up  11 inside a plant or, you know, an explosion or  12 something like that, if I open the door, if  13 there's five estops, I'm hitting all five of them.  14           MR. TOTH: And that's good.  15           MR. FOX: You know, that's what I'm  16 going to do.  17           MR. TOTH: Sure.  18           MR. BAUGHMAN: Well, again, we've  19 had e-stops fail. Eugene, you're on that project  20 itself where the e-stop was wired in and did not  21 shut the boiler off. But I'm thinking about it  22 just the opposite way, is that we make it a  23 jurisdictional requirement that one e-stop kills  24 everything, and it's a variance to come back and  25 get that approved. Instead of having it at the</p>
<p style="text-align: right;">Page 156</p> <p>1 customer's discretion, we make it part of our  2 jurisdictional requirement, and then put it in as  3 a variance that you're able to come before or  4 submit it to whoever the body would be that needs  5 to make a decision on it. But there's fewer of  6 those than there are the majority. And one of the  7 things we wanted to do in putting this to this  8 month's discussion was give enough time for us.  9           And I was on the fence with it  10 myself, because I did not have enough information.  11 I've done the homework, and by a vast majority,  12 those that are both in the service industry, the  13 inspection industry and the operators, those that  14 are operating the equipment, all voice the same  15 thing. There will be exceptions. And that's  16 where I think that for us to make it a  17 jurisdictional requirement and then come back as a  18 variance makes more sense than it does to leave it  19 up to the discretion of the industry itself.  20           MR. BOWERS: It's easier for the  21 state inspectors to control it. We know  22 95 percent of the time it's going to be a certain  23 way. But it doesn't always have to be that way.  24 Say, like, Vanderbilt, they have five huge  25 boilers. You don't want to shut down the whole</p>	<p style="text-align: right;">Page 157</p> <p>1 campus at one time. You can say you can do it a  2 different way, but if you do it a different way,  3 you've got to have training; you've got to have it  4 a certain way. It may be the same way with  5 Eastman. You can say we want it our way, but as  6 long as you've got it laid out that for the board  7 it has to come before the board to do that. That  8 way it's only going to happen in a very small  9 percentage of the situations. 95 percent of the  10 time, one e-stop will work fine.  11           MR. BAUGHMAN: Well, is it even an  12 issue that comes before the board, or is it a  13 matter of the inspectors, the chief assistant  14 being disseminated down. I don't know.  15           MR. TOTH: Well, let me kind of  16 elaborate on that, being that I've sat on all  17 sides of the table. Okay? When we put it to a  18 requirement for an inspector, what's to say that  19 inspector says no, you've got to have one, when  20 the customer wants to have individual. So now  21 we're getting back to the issue that we have, is  22 why, back under my tenure as chief, we started  23 BC's and BI's, board cases and board  24 interpretations. Because it was going to a point  25 where you have one individual making a</p>

<p style="text-align: right;">Page 158</p> <p>1 determination and somebody else over here making a 2 different one along the same lines.</p> <p>3 I agree with if this body chooses to 4 go the route of saying, okay, when we go to do a 5 permit, what does that entail? What are the 6 guidelines that says Company A can have five 7 e-stops and Company B cannot? Because I'm going 8 to tell you, I know where the enforcement is going 9 to go. The enforcement is going to tell that 10 person they have to have one e-stop. Ain't that 11 right, Chris?</p> <p>12 MR. O'GUIN: You are correct.</p> <p>13 MR. TOTH: See? So what you're 14 doing is, is you're taking it and you're saying we 15 can say all the words we want right here, but the 16 enforcement is going to tell other inspectors 17 you've got to have one e-stop. And so that goes 18 for Eastman; that goes for Parkwest. They have 19 five e-stops. And you're talking about leaving 20 the room -- Mr. Fox, what did you say you're going 21 to do if you have a situation?</p> <p>22 MR. FOX: I'm going to hit all five 23 of them.</p> <p>24 MR. TOTH: You're going to hit all 25 five. And I don't want to get into a disagreement</p>	<p style="text-align: right;">Page 159</p> <p>1 about this. But I do not want somebody to tell me 2 that people aren't going to be trained to do that. 3 I've been there. I've been in the situation under 4 emergency environments. When you're trained 5 properly, can you do it all. It's a problem when 6 you're not trained properly. And what Mr. Bowers 7 alluded to is come before the board or whoever and 8 prove that you've been trained. Well, I challenge 9 back and say prove to that inspector that an 10 operator has been trained, period. It doesn't 11 matter how many e-stops they have.</p> <p>12 MR. BOWERS: But it's same as the 13 20-minute rule and having a variance.</p> <p>14 MR. TOTH: Absolutely. And so when 15 we look at that, we say how many we have and how 16 we handle it. I agree 100 percent. If you want 17 to go through the issue of saying you want to have 18 individual e-stops that you have to come back and 19 request that to the board, I think that's a little 20 overkill. But if you say inside of the permit 21 that you request it to the State, if the response 22 from the State is I'm going to deny them all just 23 because that's the way I want to enforce it, 24 that's not kosher. There needs to be a system in 25 place that says why do you need to have an</p>
<p style="text-align: right;">Page 160</p> <p>1 individual e-stop for each boiler.</p> <p>2 MR. ROBINSON: Eugene Robinson, 3 Cincinnati Insurance. And that's the whole 4 purpose of the variance. In other words, if you 5 give -- let me finish. If you give a 6 manufacturing entity carte blanche to install 7 12 e-stops, like at the gas pumps, when you go to 8 the gas station, you turn left and you turn right, 9 you will see a mushroom button. You don't see 10 12 mushroom buttons for each gas pump. You just 11 see one.</p> <p>12 Now, let me finish. First of all, I 13 wanted to apologize for being so passionate about 14 this to the board and as well as to you, Mr. Toth. 15 And the exception is this -- as you said, the 16 exception is a matter of giving a red carpet to 17 any installer who wanted to put as many e-stops as 18 they could possibly fit.</p> <p>19 Now, the variance, if you have them 20 bring up a manual before the board to make a 21 conscious decision as to if they can approve an 22 installation of this type, you're still 23 maintaining the integrity of the State.</p> <p>24 Now, going a little further down, you 25 could take that code question and you could word</p>	<p style="text-align: right;">Page 161</p> <p>1 it to do such. That's it.</p> <p>2 MR. TOTH: I'm sorry. That's 3 great, but all that, I didn't really -- I'm sorry, 4 Eugene, I didn't get much out of that. And the 5 reason why I didn't, with all due respect, is that 6 when you're stipulating the installer can install 7 as many e-stops as they want, if the owner wants 8 to have one e-stop, he has one e-stop. So it's 9 not the installer saying you have to have 10 additional with this -- again, I'm speaking to you 11 as somebody with code experience here. Do I think 12 one e-stop is the best way to go? You're 13 absolutely right. But here is the thing, Chris. 14 This is what you've got to understand. And you 15 can look and you can get upset, but the thing 16 you've got to understand is this is code. It's 17 not just about the safety, more safety; it's about 18 the restrictions that you're putting on yourself 19 right now and putting onto the end users. Those 20 end users are going to have an avenue to take this 21 up through the legislation. That's going to come 22 raining down on your head.</p> <p>23 That's where my passion is. But just 24 because I personally believe that one e-stop is 25 the best way to go, if the NBIC, CSD-1, NFP-85 all</p>

<p style="text-align: right;">Page 162</p> <p>1 thought that too, and they probably do, they would 2 put it in the code.</p> <p>3           CHAIRMAN MORELOCK: I would agree 4 with that. And if I take my engineer hat off and 5 I put a business hat on representing Eastman, 6 Eastman is going to say we need to make a 7 data-driven decision on why we need to do this. 8 Show me the case studies where multiple e-stops 9 has created personal injury, property damage, 10 boiler failure. And I just don't know that you're 11 going to see a lot of that data. There might be 12 some isolated cases.</p> <p>13           MR. BOWERS: And I agree with 14 Marty. When you go beyond the code, more 15 restrictive than what the code is, you're kind of 16 sticking your neck out.</p> <p>17           MR. BAUGHMAN: So I'll put my two 18 cents' worth in. We have variances already in 19 place, not just for the operator, but we've got 20 code clearance requirements. Those are set in 21 writing. But who do those approvals go back to to 22 get that done? It doesn't go before the board.</p> <p>23           MR. TOTH: No, it doesn't.</p> <p>24           MR. BAUGHMAN: So you've got those 25 clearance requirements, and there's differences</p>	<p style="text-align: right;">Page 163</p> <p>1 between what CSD-1 requires, what NBIC requires, 2 what the IBC requires. There's a lot of different 3 variables within that. So that variance goes back 4 to the powers that be that are in the boiler unit.</p> <p>5           And I feel that this is the same way. 6 I don't think that each one of these has to come 7 before the board. I think that being that we've 8 got competent individuals in the chief and 9 assistant, that they look at these installations 10 and give a thumbs up or thumbs down. And if 11 there's additional consultation they need to have, 12 they go to those in the industry, bounce those 13 ideas off of you, Brian, us, and so forth. So 14 that's the way I view this, is making it to where 15 we've got it as a jurisdictional requirement for 16 the one e-stop. And then, as there's variables to 17 that, then they're presented back to them to be 18 able to analyze and get the approval out.</p> <p>19           MR. BOWERS: Well --</p> <p>20           MR. TOTH: And if I can interject 21 onto that. I agree with you. There are certain 22 rules and regulations that we do have board cases, 23 board interpretations such as clearance. The 24 reason why those were brought forward was because 25 of technology changes, was because of things of</p>
<p style="text-align: right;">Page 164</p> <p>1 modular boilers that were brought together. We 2 had a catch-all that said that you had to have 3 three foot of clearance between all boilers. We 4 had a catch-all that said you had to have five 5 foot of clearance above.</p> <p>6           The issue -- the hardship that 7 happened out in the public was constructions of 8 certain types of units such as instantaneous water 9 heaters that are hung on the wall, modular units 10 that are slid together, that's the issues.</p> <p>11           When we talk about e-stops, e-stops 12 is a one size fits all, is it not?</p> <p>13           CHAIRMAN MORELOCK: Well --</p> <p>14           MR. TOTH: No. When we're talking 15 about high-pressure boilers, it really is. 16 Because if you have a high-pressure boiler, you're 17 going to have an e-stop. To even better go beyond 18 that, if you have a low-pressure boiler, you're 19 going to have an e-stop.</p> <p>20           So -- but I agree with you. I do. 21 The thing that I'm concerned with is -- and I 22 think there's a resolution to it. And that 23 resolution goes back to the permit, goes back to 24 the question about the e-stops. Are e-stops 25 installed? Yes or no. How many stops per boiler</p>	<p style="text-align: right;">Page 165</p> <p>1 will be installed? Now, that's when the question 2 can come up. Well, why do you want to have -- why 3 do you need to have multiple e-stops? Do you need 4 to have it because of a process issue? Yes or no.</p> <p>5           Again, taking ourselves out of the 6 what's my personal belief in this. What does the 7 code tell you? It's like if I have a situation at 8 Eastman Chemical Company, that by having one 9 e-stop could compromise the operations; if I have 10 a hospital environment that doesn't feel 11 comfortable with all their boilers going down at 12 one particular time. If the question that goes 13 back is yes, how you're trained, how do we 14 understand that -- I kind of like the idea that 15 Mr. Fox alluded to with the e-stops, that there is 16 an indicator, that we not only run a line that -- 17 a circuit that disconnects, but we could also -- 18 you, as a board, could also mandate that those 19 e-stops are lit to show indication. That's a 20 possibility.</p> <p>21           But again, this opens up the 22 dialogue. When you hammer it down and you say no, 23 only one, you're putting everybody in the same 24 basket.</p> <p>25           CHAIRMAN MORELOCK: Have you got a</p>

<p style="text-align: right;">Page 166</p> <p>1 question?</p> <p>2 MR. DUNLAP: Derrick Dunlap, with</p> <p>3 Jewell Mechanical. What about they have to have</p> <p>4 one e-stop that will shut them all down. But you</p> <p>5 could also, like, if they had five boilers, you'd</p> <p>6 have Boiler 1, 2, 3, 4, 5, and then a universal on</p> <p>7 top that would kill them all. You just open a</p> <p>8 contact, right? So, I mean, you run it through</p> <p>9 the first switch, it would kill the individual</p> <p>10 boiler, come out of it, run up the second switch</p> <p>11 where they all run through, and you kill them all</p> <p>12 right there. So no matter what, they have to have</p> <p>13 one switch, but then if they wanted the option,</p> <p>14 then they have the option underneath.</p> <p>15 MR. TOTH: I mean, those are all --</p> <p>16 you know, those are options there, too. Again, it</p> <p>17 allows for us to say one e-stop and be as safe as</p> <p>18 possible, and then say, however, if you want</p> <p>19 this -- when you apply, you have to indicate that.</p> <p>20 And then we can go from there.</p> <p>21 CHAIRMAN MORELOCK: So part of the</p> <p>22 permitting process, if it's one e-stop, it's</p> <p>23 pretty straightforward, but if somebody has a</p> <p>24 complex system, as long as they present a plan to</p> <p>25 the State that's acceptable, then that will be</p>	<p style="text-align: right;">Page 167</p> <p>1 approved on a permit, right?</p> <p>2 MR. TOTH: I would say that that</p> <p>3 would be a way to resolve that issue. Again, it</p> <p>4 goes back to an understanding of we're not just</p> <p>5 going to turn it down because that's a personal</p> <p>6 preference. It's not my personal preference to</p> <p>7 have four e-stops at Nokian Tyre.</p> <p>8 MR. BOWERS: So what would keep --</p> <p>9 is there a fallback? You talk about Eastman.</p> <p>10 Eastman goes there and they said we're putting in</p> <p>11 this new boiler room and we want -- we've got a</p> <p>12 new boiler room and we want multiple e-stops. If</p> <p>13 they go to their inspectors, Jesse Smith, or</p> <p>14 whoever it is out in that area, and says, I want</p> <p>15 this, and he says, no, Sam says only one, well,</p> <p>16 we'd agree with that. Is there a forum that they</p> <p>17 could bring it to the board --</p> <p>18 MR. TOTH: Well, yeah. They can</p> <p>19 always bring anything they want to the board.</p> <p>20 MR. BAILEY: Yeah. I was going to</p> <p>21 mention that, that in the statute and in the</p> <p>22 rules, any action taken by the boiler unit, they</p> <p>23 can appeal that within 15 days and come before the</p> <p>24 board to state their case and to either see if the</p> <p>25 board will reverse it or whatever. So there is an</p>
<p style="text-align: right;">Page 168</p> <p>1 avenue to protest something that the boiler unit</p> <p>2 does, or if they don't permit them or say, hey,</p> <p>3 you have to have one e-stop and they are real</p> <p>4 adamant that they need multiple ones, but Sam and</p> <p>5 Chris won't approve it, they can appeal it and</p> <p>6 come here.</p> <p>7 CHAIRMAN MORELOCK: And what are</p> <p>8 other jurisdictions doing about this? Do they</p> <p>9 have the same problem?</p> <p>10 MR. CHAPMAN: They haven't said</p> <p>11 anything at the moment.</p> <p>12 CHAIRMAN MORELOCK: I mean, I agree</p> <p>13 with Mr. Toth in the fact that we've got national</p> <p>14 and international standards that say you can, and</p> <p>15 they've vetted it probably a lot longer than we've</p> <p>16 vetted it.</p> <p>17 Yes, the jurisdiction can make</p> <p>18 requirements more restrictive if they choose. And</p> <p>19 that's fine. But it's -- I don't want anybody to</p> <p>20 feel like we're compromising safety, because we</p> <p>21 don't. But our boilers, you know, we've got DCS</p> <p>22 control rooms with people sitting in the</p> <p>23 powerhouse watching those things 24/7. So it's</p> <p>24 not like a boiler sitting out there that's only</p> <p>25 seen, at best, every four hours. And so my</p>	<p style="text-align: right;">Page 169</p> <p>1 request is just consider that in your</p> <p>2 decision-making.</p> <p>3 MR. BAUGHMAN: But I feel that</p> <p>4 you're in the minority in operations.</p> <p>5 CHAIRMAN MORELOCK: Oh, I agree.</p> <p>6 MR. BAUGHMAN: And so what we're</p> <p>7 looking at is -- and we don't know the percentage,</p> <p>8 but we're talking about high 90s. So we're trying</p> <p>9 to mold this to carry the majority and then attend</p> <p>10 to the minority. And I think that by what we're</p> <p>11 discussing here, which is great discussion, that</p> <p>12 we'll be able to look at that and then be able to</p> <p>13 come up with a conscientious decision based on</p> <p>14 safety. Because that's what this whole board is</p> <p>15 about, is safety.</p> <p>16 CHAIRMAN MORELOCK: I agree.</p> <p>17 MR. BAUGHMAN: And so one of my</p> <p>18 questions that comes up in this is that we're</p> <p>19 talking about the permitting and what have you,</p> <p>20 what do we do retroactively, which is also part of</p> <p>21 a discussion. So we're looking at moving it here</p> <p>22 forward, but then what do we look at for those</p> <p>23 that are behind, retroactive, that don't have</p> <p>24 e-stops presently or do have e-stops. But either</p> <p>25 way, that's part of the further discussion that I</p>

<p style="text-align: right;">Page 170</p> <p>1 wanted to put out there.</p> <p>2 MR. TOTH: If I can interject, you</p> <p>3 guys, this board has already addressed that and</p> <p>4 you've done a great job with that. And that's on</p> <p>5 the later inquiry that says preexisting locations</p> <p>6 are required to have e-stops. So when you do go</p> <p>7 in, based on the requirements leaving today, be it</p> <p>8 one, be it one for each boiler, whatever it is,</p> <p>9 the understanding is you don't have an e-stop. No</p> <p>10 different than what I did with Parkwest Medical</p> <p>11 when they became my client, and I said, "Look,</p> <p>12 guys, you don't have e-stops at every point of</p> <p>13 egress. Let's get them there."</p> <p>14 Now, at that particular time, their</p> <p>15 choice was to piggyback on what they already had,</p> <p>16 which was four e-stops, one for each boiler, and</p> <p>17 then they added the fifth. And then they had</p> <p>18 panels at the other two points of egress. But I</p> <p>19 think it's done a great job in handling that.</p> <p>20 Moving forward, now, what my concern</p> <p>21 would be is for an inspector to go in and see five</p> <p>22 e-stops or four e-stops and start requiring, no,</p> <p>23 you've got to put these all on one circuit. See,</p> <p>24 that would be a concern that I would have. But,</p> <p>25 again, that's the responsibility of this body.</p>	<p style="text-align: right;">Page 171</p> <p>1 This body sets the rule, tells that body how to</p> <p>2 enforce it. And so whichever way, I'm fine with.</p> <p>3 I'm just playing almost devil's advocate here and</p> <p>4 saying, you know, let's be careful about it.</p> <p>5 But, again, if you go with one</p> <p>6 e-stop, I'm walking out of here happy as a lark</p> <p>7 saying this is easy now. Any client I have,</p> <p>8 you've got one e-stop.</p> <p>9 MR. NEVILLE: (Indicating.)</p> <p>10 CHAIRMAN MORELOCK: Mr. Neville, do</p> <p>11 you have a comment?</p> <p>12 MR. NEVILLE: Is it possible for</p> <p>13 the board to have a preference for the 95 percent?</p> <p>14 So the preference may be to have one e-stop which</p> <p>15 allows the 5 percent that have a valid cases to,</p> <p>16 you know, not have just one e-stop that would kill</p> <p>17 the process. And maybe that could take care of</p> <p>18 the 95 percent of the ones that -- I mean, one</p> <p>19 e-stop is convenient for a designer to say, "Hey,</p> <p>20 we're going to have one e-stop for that boiler</p> <p>21 room. But there's other places where they're not</p> <p>22 in a boiler room. They're, you know, in a -- on a</p> <p>23 campus, you know, multiple places.</p> <p>24 So I was just curious if</p> <p>25 preference -- you know, if we could state in the</p>
<p style="text-align: right;">Page 172</p> <p>1 checklist that, hey, the preference is to have one</p> <p>2 e-stop per egress in the boiler room. And to do</p> <p>3 it that way, to get most of them to comply with</p> <p>4 that.</p> <p>5 MR. BAUGHMAN: Instead of a</p> <p>6 jurisdictional rule?</p> <p>7 MR. NEVILLE: Right.</p> <p>8 MR. BAUGHMAN: Well, there again,</p> <p>9 that's food for thought.</p> <p>10 MR. TOTH: If I may, are you</p> <p>11 referring to, like, on the permit for installation</p> <p>12 when you say checklist? Because you're not</p> <p>13 talking about variances. Variances are different.</p> <p>14 MR. NEVILLE: Right.</p> <p>15 MR. TOTH: Are you talking about a</p> <p>16 permit?</p> <p>17 MR. NEVILLE: Right.</p> <p>18 MR. TOTH: So on a permit, say, you</p> <p>19 know, one is recommended for, you know, for</p> <p>20 installations. Now, if others want to go beyond</p> <p>21 that or have a case to say that one won't work for</p> <p>22 this application.</p> <p>23 MR. BAUGHMAN: I think that still</p> <p>24 leaves us where we're at --</p> <p>25 MR. TOTH: Well, you know --</p>	<p style="text-align: right;">Page 173</p> <p>1 MR. BAUGHMAN: -- if I'm not</p> <p>2 mistaken.</p> <p>3 MR. TOTH: I'm sorry I'm talking</p> <p>4 over you. Go ahead.</p> <p>5 MR. BAUGHMAN: No. Just my</p> <p>6 thoughts with that -- and it's good thought and I</p> <p>7 appreciate the input -- but that kind of leaves us</p> <p>8 where we're at now on preferential. It doesn't</p> <p>9 define. What we're looking for and why this case</p> <p>10 has even been brought up is to give delineation on</p> <p>11 one or the other, and having a variance approach</p> <p>12 to it back through the boiler unit. So I think if</p> <p>13 we leave it open, as far as a preference goes,</p> <p>14 it's just -- there again, I don't know whose</p> <p>15 preference it goes to.</p> <p>16 MR. TOTH: And if I can add onto</p> <p>17 that. Would the chief -- would you be willing to</p> <p>18 say, okay, we have to have an e-stop that kills</p> <p>19 all boilers in the boiler room on the permit, but</p> <p>20 then also have the opportunity for them to apply</p> <p>21 for a variance from that rule in writing that a</p> <p>22 accompanies the permit explaining their reasoning</p> <p>23 behind having multiple?</p> <p>24 And so then it gets to that. Yes, we</p> <p>25 all agree one e-stop is the safest way to go. It</p>

<p style="text-align: right;">Page 174</p> <p>1 handles the problem. It kills the boiler. But  2 then if you have somebody that says, oh, well,  3 this tells me I have to have one, but I can also  4 apply with the permit, in writing, an explanation  5 of why I choose to have individual e-stops. And  6 so then you do have an Eastman Chemical Company or  7 one of the hospital groups. And then in that, you  8 can give -- because do you still have the  9 guidelines of how to fill out the permit? Is that  10 still with it?  11 MR. CHAPMAN: Yes.  12 MR. O'GUIN: Yes.  13 MR. TOTH: So under that bubble,  14 that number bubble, you put in there what's  15 expected in that letter of your intent, how you  16 recommend, you know, the training of the  17 individuals, and then the boiler unit can look at  18 that and say, you know, "Yes. Okay. We agree to  19 that."  20 And, again, just like this board,  21 this board goes and makes a ruling on a variance.  22 That ruling does not get checked off until when?  23 Until the boiler unit does an inspection.  24 MR. CHAPMAN: That's right.  25 MR. TOTH: Same thing happened when</p>	<p style="text-align: right;">Page 175</p> <p>1 I started the permit process. It doesn't matter  2 if I checked off or stamped it or I had a designee  3 do it, that wasn't approved until that inspector  4 went out there and verified everything here  5 matched what they had out there.  6 MR. BOWERS: That would do two --  7 that's a good point. It would give the state  8 inspector a discretion. He says this is the  9 reason we do it. If for some reason the state  10 inspector don't agree with it, then they can  11 appeal it to the board.  12 MR. TOTH: Sure. Absolutely.  13 MR. BOWERS: So they can go -- but  14 the state inspector would also have that  15 discretion that he can approve it if he wants to.  16 Say the guy comes to Sam or Chris and says this is  17 the reason we need to put multiple switches in,  18 because we've got this process, we're going to --  19 the product will clog up or it's going to be more  20 dangerous to do, shut everything down. If they  21 explain it to Chris and Sam, Chris and Sam have  22 the authority to say, okay, I approve that.  23 MR. TOTH: Sure.  24 MR. BOWERS: As long as you do  25 this, this, this, I'll let you do that. That way</p>
<p style="text-align: right;">Page 176</p> <p>1 it gives them an avenue out. Because 99 percent  2 of the time, it's going to be one. But at least  3 they have that leeway to change it, then, for some  4 reason. The owner also has an avenue and says  5 maybe they don't understand. I want to appeal it  6 to the board.  7 MR. TOTH: And I agree with that.  8 Because you're -- again, I started this with  9 talking about the exception and the rule. The  10 rule in this case is 90-something plus are going  11 to go with one e-stop. The exception is that few  12 percentile that will want multiple. And I think  13 that to turn it around, the answer to the question  14 or the answer to the inquiry is yes, it's  15 required. Yes, required. However, a variance may  16 be issued upon permitting, or a variance request.  17 And we can wordsmith that to where it comes out  18 right. But in essence, what we're trying to  19 achieve is yes, you're required to have one e-stop  20 to kill all the boilers in the boiler room in that  21 single space, not the -- if they have multiple  22 boiler rooms all over, just in that space, right?  23 MR. CHAPMAN: That individual  24 space.  25 MR. TOTH: And then follow that up</p>	<p style="text-align: right;">Page 177</p> <p>1 with the exception, which, however, you may apply  2 for multiple e-stops through, you know, the boiler  3 inspection unit, through the permitting. And  4 we'll work together and verbalize that.  5 MR. BAILEY: Mr. Chairman,  6 piggybacking off of that gentleman's suggestion  7 over there -- and maybe I'm missing something  8 here -- if we have a requirement that says you  9 have to have one e-stop to shut all the boilers  10 down at this location, there's nothing that  11 prohibits that company from adding separate  12 e-stops, just so long as they have one major  13 e-stop. I mean, is there anything that now would  14 prohibit that?  15 CHAIRMAN MORELOCK: Well, I mean,  16 for us, if you want one e-stop to shut the whole  17 thing down, you would program the DCS to shut the  18 whole thing down.  19 MR. BAILEY: Right.  20 CHAIRMAN MORELOCK: And that's  21 not --  22 MR. BAILEY: But, I mean, can you  23 not then have separate --  24 CHAIRMAN MORELOCK: Oh, yeah.  25 MR. BAILEY: Yeah. But, I mean,</p>

<p style="text-align: right;">Page 178</p> <p>1 right now there's that would prohibit it. If  2 you-all took the position that you have to have  3 one that shuts them all down, there's nothing  4 right now that would prohibit them from adding  5 separate ones for each boiler if that's what they  6 wanted to do.</p> <p>7 MR. TOTH: Absolutely.</p> <p>8 CHAIRMAN MORELOCK: Yes.</p> <p>9 MR. TOTH: I would say, if I may  10 answer for you, absolutely. The only prohibitive  11 factor that you're going to have on that,  12 Mr. Bailey, is where it comes -- you know, it's a  13 customer's choice. It's cost prohibitive. I  14 mean, it going to -- you're running conduit or  15 conductors and wires and everything else. That's  16 why when somebody wants to put in multiple  17 e-stops, they consciously know what they're doing.  18 They consciously know we're going to quadruple our  19 cost in doing this.</p> <p>20 So I propose to you, Mr. Chairman,  21 and the board, that we revise reply, after this  22 discussion for Number 5, to yes, and then put the  23 wording in there that allows for a waiver. I  24 wouldn't call it a variance. I would call it a  25 waiver, because a variance comes here; a waiver</p>	<p style="text-align: right;">Page 179</p> <p>1 goes there.</p> <p>2 CHAIRMAN MORELOCK: Well, I mean,  3 we have to be careful to make it look like that  4 just because companies, like Valero, hospitals,  5 Eastman, all these -- you know, ETSU, I don't  6 know. I mean, you know, I don't know if they've  7 got one e-stop for all their boilers or not. But  8 you don't want people to feel like you're  9 penalizing them just because they've got a complex  10 system.</p> <p>11 MR. TOTH: Exactly.</p> <p>12 CHAIRMAN MORELOCK: They've got a  13 track history of being safe. Why are we going to  14 force them to actually spend more money to keep  15 doing what they're doing and it's not been a  16 problem. That's my only thought.</p> <p>17 I'm not against it. I understand  18 where these small installations are, yes. I agree  19 wholeheartedly, because they don't have -- we've  20 had these long conversations about even these  21 attendant variances. Most of these folks are  22 running it just like a piece of equipment. They  23 have no idea of the stored energy that's in there  24 and all that. For those applications, yes, you  25 want one button to shut the whole thing down so</p>
<p style="text-align: right;">Page 180</p> <p>1 you don't hurt anybody. I agree with you. But if  2 you've got a whole staff of competent people that  3 know how to handle that pressure equipment, just  4 don't unduly penalize them for being safe.</p> <p>5 MR. FOX: And I agree with what  6 you're saying, but every emergency situation is  7 different.</p> <p>8 CHAIRMAN MORELOCK: I agree.</p> <p>9 MR. FOX: Now, I can tell you that  10 Mr. Baughman knows just as well I do that we've  11 had people in a boiler room with a couple of  12 boilers in there on a forklift, and it ran into a  13 gas pipe and ruptured the gas pipe while the  14 boilers was actually running. That gas is  15 expelled into the room. This other boiler now is  16 sucking in, into the air intake. We've got a  17 possible explosion right there. And it's not  18 going to be good. But if we killed both boilers,  19 we take that explosion factor away.</p> <p>20 MR. BAUGHMAN: And I think the  21 direction this is heading is great. It's going to  22 need to be kind of fine-tuned. But there again,  23 it's communication back to the inspectors. It's  24 not an inspector's decision, a field inspector, a  25 deputy inspector. It's between the chief and the</p>	<p style="text-align: right;">Page 181</p> <p>1 assistant chief. That's where this waiver comes  2 down to. And we don't want to have individual  3 decisions, then, on what's going on. So that  4 communication is important back to the state  5 inspectors and the insurance inspectors. And then  6 making sure that we, again, identify not only is  7 this moving forward with new installations, but it  8 addresses those that don't have e-stops presently.  9 And then what do we do retroactively? Do we  10 grandfather in the ones that already have single  11 e-stops and so forth? So I want to make sure that  12 we address those different entities very  13 specifically so that there's clear communication  14 to the deputy inspectors on what they're  15 information is that they're passing on to their  16 customers.</p> <p>17 MR. TOTH: And I think that's the  18 operational end of it. My personal opinion is the  19 individuals that already have individual e-stops,  20 they're already there. They're operational. I  21 would always suggest that an inspector pay them  22 closer attention, take them through the gamuts of  23 inspection. And really, it goes back to  24 inspections, too.</p> <p>25 MR. BAUGHMAN: So my next -- the</p>

<p style="text-align: right;">Page 182</p> <p>1 next follow-up to that is you've got a preexisting 2 boiler that's then getting -- and it's already got 3 e-stops, and it's being removed. And a new boiler 4 is going in, new permit, then do you -- and I'm 5 taking that I kind of know the answer, but I'm 6 saying you've got to go back to them and say codes 7 have updated. We now have to go in and change our 8 estop requirement or go for a waiver.</p> <p>9 MR. TOTH: And I think that's where 10 the boiler unit would need to look at that. I 11 know if I were still sitting in that seat, I would 12 look at it and say, okay, it's a preexisting. Are 13 they showing an aptitude for safety? Are they 14 looking -- you know, are they handling -- what's 15 the reason? Why do you want to have that?</p> <p>16 I think it is a retroactive thing. 17 And if you enforce it, it's going to be kind of a 18 little bit hard on the end user. I would say as 19 long as they can show a sense of safety, that 20 replacement boiler gets to be put into the same 21 circuit as the one that they're taking out.</p> <p>22 MR. BAUGHMAN: Well, and I go back 23 to thinking about some of our codes. We've got 24 codes that are grandfathered in. We've adopted 25 CSD-1, but we said, well, the old boilers, we</p>	<p style="text-align: right;">Page 183</p> <p>1 don't have to upgrade unless there's a major 2 repair done to the boiler. And we don't delineate 3 what's a repair. We just say at the time of 4 repairs to the boiler, the boiler has to be 5 upgraded to the new code of the day. Well, that's 6 subjective. And it also says, well, the old 7 boilers, even though they've got old, outdated 8 single-gas valves and what have you, those are the 9 ones that really should be updated because the new 10 boilers have all the newest and safer controls. 11 But we grandfather in the older stuff. And I've 12 never quite understood that thinking except from 13 an economic standpoint, not from a safety 14 standpoint.</p> <p>15 And so, you know, you get to weighing 16 out both these things. We're here because of 17 safety, but we're also considering the economic 18 impacts of what it is to the customers. And you 19 almost have to put that aside, because safety 20 trumps everything. So not to get on a bandwagon 21 about some of that, but at any rate, it's still 22 thought for discussion on grandfathering and so 23 forth. And that may be something we take up as we 24 go through this process.</p> <p>25 MR. TOTH: Well, if I may -- and I</p>
<p style="text-align: right;">Page 184</p> <p>1 was paying close attention, but I was multitasking 2 a little bit and I was doing a little wordsmithing 3 here -- the response would be changed from current 4 to yes, however, the owner-user or their designee, 5 installer, may apply for a waiver from the chief 6 boiler inspector during the installation 7 permitting.</p> <p>8 MR. ROBINSON: May?</p> <p>9 MR. TOTH: Yeah, you may. You 10 don't have to. It's an interpretation, Gene. 11 It's yes or you may apply. You're either going to 12 have one or you're allowed to apply for a waiver.</p> <p>13 MR. ROBINSON: Agreed.</p> <p>14 MR. TOTH: You don't have to apply.</p> <p>15 MR. BOWERS: And that would be the 16 same thing under preexisting. If they've already 17 got a preexisting system like the hospital, today, 18 if they were to change out a boiler, then they 19 would have to go back to the state inspector and 20 say, "This is how we've been running for years. 21 We haven't had any problems. Can we continue to 22 run with multiple e-stops?" And Sam or Chris 23 would say yay or nay. If you've never had no 24 problem, we don't see no problem with it.</p> <p>25 MR. TOTH: Yeah. And then, as</p>	<p style="text-align: right;">Page 185</p> <p>1 Mr. Bailey alluded to, then if the Boiler Unit 2 decides no, well, that gives grounds for the 3 submitter to then come back and say, well, I would 4 like to appear on the boiler board of rules to -- 5 yeah, absolutely. It absolutely gives 6 opportunity.</p> <p>7 Obviously, the Boiler Unit is not 8 just going to say no. They're going to have a 9 just reason why. I mean, you've got to have a 10 just reason why you tell somebody no.</p> <p>11 So I would say, Mr. Chairman, that my 12 submittal on Number 5 is as stated in the reply. 13 I'll be more than happy to reread that. If 14 somebody want to wordsmith it, I've got it on 15 paper and we can look at it.</p> <p>16 MR. BAUGHMAN: So the reply is 17 being changed to yes.</p> <p>18 MR. TOTH: Yes. However, the 19 owner-user, or their designee, may apply for a 20 waiver from the chief boiler inspector. And I'm 21 doing to put in here "or his" -- which we're not 22 male or female here -- "designee during the 23 installation permitting process."</p> <p>24 MR. BAUGHMAN: A question comes to 25 mind. We're talking about stationary</p>

<p style="text-align: right;">Page 186</p> <p>1 installations. How do we address e-stops with 2 rental boilers, temporary boilers.</p> <p>3 MR. TOTH: On top of the 4 installation -- or on top of the ones that are 5 already there? So let me get this straight. So 6 you bring in a boiler -- again, it goes really 7 down to an individual case-by-case basis. Because 8 I have a boiler room that has five boilers. Am I 9 bringing that boiler into my boiler room? Or is 10 it on a trailer outside of my boiler room? 11 Because as we've discussed before, each boiler 12 room is it's own entity.</p> <p>13 So if I have three boilers in this 14 boiler room, I have one e-stop. That one e-stop 15 kills all three boilers. If in a situation that 16 third boiler has to be repaired but I need to 17 bring in a rental unit, that rental unit is 18 sitting outside in its own trailer. It, yes, 19 should have its own e-stop.</p> <p>20 MR. BAUGHMAN: Well, and that 21 was -- and so just as I'm going through thinking 22 about these variables in the industry, they pull 23 up a rental boiler, some of these rentals aren't 24 even in an enclosed trailer. Some of them are 25 just weather-proofed boilers that don't even have</p>	<p style="text-align: right;">Page 187</p> <p>1 an e-stop. They've just got an on/off switch. 2 And so as they're going in and they're tying in to 3 an existing boiler room that may have multiple 4 boilers that are still online. It's there to 5 augment or what have you. I was just kind of 6 wondering how that goes through on our permitting 7 process. And there again, I've looked at rental 8 boilers that don't have an e-stop on their 9 trailer. The enclosed ones typically do. They're 10 box-enclosed and what have you. But there's 11 companies that bring boilers in that are on these 12 open trailers, and I was just wondering how that 13 gets addressed. At any rate, that kind of goes 14 back to their permitting and what have you, but I 15 was just kind of thinking about, as we're going 16 through this, when they make a permit application 17 for installation, how we address the e-stop on 18 that.</p> <p>19 MR. TOTH: And I think you hit the 20 nail on the head when you talk about that that's 21 the exceptions. And that's where the Boiler Unit 22 is able to come in and put a case-by-case eye on 23 the situation. Because those boilers that are out 24 on the trailer, yes, they have to have either an 25 e-stop plunger or an emergency disconnect.</p>
<p style="text-align: right;">Page 188</p> <p>1 MR. BAUGHMAN: Yeah. They're a 2 separate room in itself, just as if you had a 3 separate --</p> <p>4 MR. TOTH: As long as -- yeah, 5 right. As long as they have their own -- I'm 6 sorry.</p> <p>7 MR. BAUGHMAN: Sure. Well, and 8 we've got -- well, outside of kind of over in your 9 neck of the woods, the ammunition place that's got 10 boilers spread out all over the place, and they've 11 had issues in the past. But there again, when one 12 of those -- what I would like to do is also look 13 at it -- and the customer may want this, too, but 14 when they have an explosion in one of those TNT 15 buildings, the buildings are supposed to be spread 16 out enough that they -- but when you walk up to a 17 building and it shows -- they show the amount of 18 TNT that's in the building, and those things are 19 in the five and six figures, you're going, holy 20 moley.</p> <p>21 And there again, it's an individual 22 building which would require an individual e-stop 23 for one boiler, but it makes me wonder about the 24 existing buildings that are in close proximity. 25 But, there again, it's not a one-size-fits-all,</p>	<p style="text-align: right;">Page 189</p> <p>1 and it goes back to the boiler unit itself. But 2 it's interesting what we work with in the 3 industry, isn't it?</p> <p>4 MR. O'GUIN: And, Dave, there 5 shouldn't be many multiple e-stops out there. I 6 mean, this has been in force for many past chiefs, 7 one e-stop in a boiler room, except for, like, 8 Eastman and a couple of others. But all the 9 hospitals that are the majority of these variances 10 are one e-stop, with apparently Parkwest is going 11 to be the first one that I've done a variance on 12 that has multiple e-stops in a boiler room.</p> <p>13 MR. BAUGHMAN: I agree. I've seen 14 many that have one of for all of them.</p> <p>15 MR. O'GUIN: So we're not talking, 16 as far as retroactive. I mean, there shouldn't be 17 that many out there.</p> <p>18 MR. BAUGHMAN: But there again, the 19 decision needs to be made, do we make it 20 retroactive or not. And, you know, I've got my 21 own view on that from a safety standpoint. But 22 there again, I've got views on a lot of stuff.</p> <p>23 MR. TOTH: That's all I've got.</p> <p>24 MR. BAUGHMAN: So we're changing it 25 to yes with these changes for now, and then does</p>

<p style="text-align: right;">Page 190</p> <p>1 it get brought back before the board for the final 2 review, or --</p> <p>3 CHAIRMAN MORELOCK: Well, no. 4 Everything else has been voted.</p> <p>5 MR. BAUGHMAN: Okay.</p> <p>6 CHAIRMAN MORELOCK: So if you-all 7 move to vote, we're going to vote on Item 5 right 8 now.</p> <p>9 MR. BAUGHMAN: And I didn't know 10 about any tweaking or whatever that needed to be 11 done back through the process. Does that go 12 before us, or does that carry back on through 13 them?</p> <p>14 MR. TOTH: That's going -- I would 15 say, not to speak for the Boiler Unit, it's the 16 Boiler Unit's responsibility to update their 17 permits to address the requirements.</p> <p>18 MR. BAUGHMAN: Sure. Good. I 19 don't have to think about anything further, then, 20 other than saying yes or no.</p> <p>21 MR. BOWERS: So if we approve 5, 22 that should cover the whole --</p> <p>23 CHAIRMAN MORELOCK: That whole 24 item.</p> <p>25 MR. BOWERS: Because we've already</p>	<p style="text-align: right;">Page 191</p> <p>1 approved the other ones except for Number 5.</p> <p>2 MR. FOX: Number 5.</p> <p>3 MR. BOWERS: And we've deleted one 4 of them off of there.</p> <p>5 MR. FOX: We deleted 9.</p> <p>6 MR. BAUGHMAN: That was 9. Which 7 this decision may carry over into our March --</p> <p>8 MR. TOTH: It definitely will. It 9 definitely will, into March, and the low-pressure 10 boilers. I think that's going to be a very good 11 discussion based on much conversation in the 12 industry concerning low-pressure boilers and 13 potable water heaters and things of that nature.</p> <p>14 So what would happen, Mr. Bowers, is 15 that once the board agrees on this, we agree on 16 the verbiage of the response, if the board agrees 17 with that, I'll go back in and clean this up as 18 per the requirements and send it in to Carlene. 19 And then it would be -- you would publish it with 20 the other board interpretations that are out on 21 the Web.</p> <p>22 CHAIRMAN MORELOCK: Okay. Any 23 other questions or comments?</p> <p>24 (No verbal response.)</p> <p>25 CHAIRMAN MORELOCK: All right.</p>
<p style="text-align: right;">Page 192</p> <p>1 We've got a motion on the floor. I'm going to 2 call the question. All in favor say aye.</p> <p>3 (Affirmative response.)</p> <p>4 CHAIRMAN MORELOCK: Opposed?</p> <p>5 (No verbal response.)</p> <p>6 CHAIRMAN MORELOCK: Abstentions, 7 not voting?</p> <p>8 (No verbal response.)</p> <p>9 CHAIRMAN MORELOCK: Motion carries.</p> <p>10 MR. BOWERS: So the motion there 11 was for Number 5, or was that for all of them?</p> <p>12 MR. BAUGHMAN: Number 5.</p> <p>13 CHAIRMAN MORELOCK: We voted the 14 other ones. Remember, we took them one at a time.</p> <p>15 MR. BOWERS: So we don't have to 16 add any more to that.</p> <p>17 CHAIRMAN MORELOCK: No. We're 18 done. We are done.</p> <p>19 All right. Let's look at our agenda 20 and see where we're at. That takes us to 21 BI 19-02.</p> <p>22 Mr. Toth, do you want to present the 23 interpretation concerning carbon monoxide 24 detectors?</p> <p>25 MR. TOTH: Thank you again,</p>	<p style="text-align: right;">Page 193</p> <p>1 Mr. Chairman and members of the board. The 2 interpretation, as before you, came from 3 discussions here at previous meetings. And I 4 volunteered to actually put together an 5 interpretation request, because I'm pretty sure 6 there's going to be a lot of questions out there 7 in the industry.</p> <p>8 I based the interpretation inquiries, 9 and more specifically, the replies on -- 10 primarily, the replies that come from National 11 Board Inspection Code, the ASME. I think that 12 we're all in agreement that carbon monoxide 13 detection is critically important, not only in 14 boiler operations but anywhere you have fuel 15 that's combusted.</p> <p>16 We've all heard the horror stories 17 around carbon monoxide even to the point where not 18 only people, children, have died but become 19 gravely ill and really didn't understand why they 20 were ill for some time. We've run into that in 21 the industry where you do have boiler operators, 22 people that are working in and around the boiler 23 rooms becoming ill without an understanding. It 24 didn't go to the point where it was fatal, but to 25 the point where they didn't understand why they</p>

<p style="text-align: right;">Page 194</p> <p>1 were feeling so bad. And it all came back to 2 carbon monoxide.</p> <p>3           So I really applaud the State for 4 taking the approach of enforcement, and, also, the 5 NBIC. Now, with that said, it may get a little 6 concerning where this body enforces carbon 7 monoxide detection. And so that's where we've 8 brought that to the attention of the board.</p> <p>9           So if you would, I would like to read 10 down through the inquiries as I've done before, 11 the replies, and then open it up for any 12 discussion that the board may have. And I'll try 13 to answer from my end, but I think everybody here 14 has their own opinion on it as well.</p> <p>15           Inquiry 1, is it required to have a CO 16 detector/alarm in the boiler room or space 17 containing a boiler that has a fuel firing energy 18 input of greater than or equal to 100,000 BTUs per 19 hour?</p> <p>20           Just for knowledge's sake, the 21 100,000 BTUs per hour is based off of the 22 inspection requirements set for low-pressure units 23 here within the state of Tennessee. Anything 24 equal to that or greater than is required to be 25 inspected and registered by the State.</p>	<p style="text-align: right;">Page 195</p> <p>1           So the reply comes back as yes.</p> <p>2           Number 2, if Inquiry 1 is yes, does this 3 requirement include both high- and low-pressure 4 boilers?</p> <p>5           Reply, yes.</p> <p>6           Inquiry 3, if Inquiry 1 is yes, is 7 unfired steam, slash, water boilers utilizing the 8 fired fuel waste heat combustion gases; example, 9 heat recovery steam generator as its energy source 10 required so?</p> <p>11           Answer is yes.</p> <p>12           Number 4, is it required to have a CO 13 detector where the boiler room or space where a 14 boiler is installed possesses a higher-space 15 mechanical ventilation system that either 16 continuously operates or electrically tied to 17 operate whenever the boiler is on in the space or 18 fired?</p> <p>19           The response is no.</p> <p>20           Again, these are not my personal 21 opinions.</p> <p>22           (Mr. Baughman exits the room.)</p> <p>23           MR. FOX: Can I interject something 24 there?</p> <p>25           MR. TOTH: No.</p>
<p style="text-align: right;">Page 196</p> <p>1           MR. FOX: Not yet?</p> <p>2           MR. TOTH: Not yet. Again, 3 Mr. Fox, this is not a personal opinion. This is 4 just an opinion for editorial.</p> <p>5           Mr. Chairman, would you like me to 6 pause until Mr. Baughman...</p> <p>7           CHAIRMAN MORELOCK: Yes. We 8 probably ought to because we don't have a quorum 9 without Mr. Baughman, as far as a voting quorum 10 anyway.</p> <p>11           (Pause in the proceedings.)</p> <p>12           CHAIRMAN MORELOCK: Continue, sir.</p> <p>13           MR. TOTH: Inquiry Number 5, is it 14 allowed to install a CO detector anywhere within 15 the boiler room or space where a boiler is 16 installed?</p> <p>17           Reply, no. CO detector shall be 18 installed no lower than five feet above the lowest 19 space in a boiler room or space containing a 20 fuel-fired burner.</p> <p>21           Number 6, is it required for CO 22 detectors to be hardwired electronically?</p> <p>23           The reply is no.</p> <p>24           Number 7, is it required for the CO 25 detector to have two means of power source?</p>	<p style="text-align: right;">Page 197</p> <p>1           Reply, yes. One of which may be a 2 battery-powered source.</p> <p>3           Number 8, is it required for a 4 detector to be dedicated for CO detection only, or 5 may the detector be a multipurpose detector/alarm?</p> <p>6           I put No. But we need to -- I need 7 to probably reword that and not give an and/or. 8 It needs to be a straightforward response.</p> <p>9           So if I may, I would change that 10 question to is it required for a detector to be 11 dedicated for CO detection only?</p> <p>12           The response will be no. Detectors 13 may be of multipurpose, detection or alarm.</p> <p>14           CHAIRMAN MORELOCK: So you'll have 15 a second sentence with that last part?</p> <p>16           MR. TOTH: I will have a comma.</p> <p>17           CHAIRMAN MORELOCK: A comma?</p> <p>18           MR. TOTH: Yeah. It will be no 19 with a colon and elaboration.</p> <p>20           Number 9, is it allowed for 21 additional control and safety devices on the 22 boiler that monitor carbon gas O2 levels to ensure 23 complete combustion; for example, O2 trim, et 24 cetera, be acceptable as a CO detector for a 25 boiler room or space where the boiler is</p>

<p style="text-align: right;">Page 198</p> <p>1 installed?</p> <p>2           Reply is no.</p> <p>3           Number 10, is there a requirement for</p> <p>4 the decibel level, the audible alarm must emit?</p> <p>5 Is there a requirement for the decibel level the</p> <p>6 alarm must admit?</p> <p>7           The response is yes. The decibel</p> <p>8 level must exceed to the normal operation decibel</p> <p>9 level of the boiler room or space where the boiler</p> <p>10 is installed or located.</p> <p>11           And that's it. And I will be -- I</p> <p>12 would recommend that we do as we've done in other</p> <p>13 interpretations, and just go down through and open</p> <p>14 those that have discussion to discuss.</p> <p>15           MR. BOWERS: Well, one thing I'll</p> <p>16 mention, it's kind of -- you know, I think, to the</p> <p>17 National Board, by coming out with this is</p> <p>18 overreaching. That's my personal opinion.</p> <p>19           You know, this is something that's</p> <p>20 required by a lot of fire codes anyhow, and just</p> <p>21 because they don't enforce it like maybe they</p> <p>22 should, now it's fallen back on the boiler people</p> <p>23 to enforce something that doesn't really have to</p> <p>24 do with a boiler. It's just a safety issue. So</p> <p>25 now it's fallen back on the boiler people to do</p>	<p style="text-align: right;">Page 199</p> <p>1 something that's beyond their expertise.</p> <p>2           MR. TOTH: I can see where you're</p> <p>3 coming from on that, Mr. Bowers; however, on the</p> <p>4 other side of that, it's about safety.</p> <p>5           MR. BOWERS: How about sprinkler</p> <p>6 systems? How about fireproofing? How about --</p> <p>7 there's a lot of things we could put in the boiler</p> <p>8 room that shouldn't fall back on the boiler</p> <p>9 people.</p> <p>10           MR. FOX: But a sprinkler system or</p> <p>11 something like that does not have the capability</p> <p>12 of emitting CO as a boiler does.</p> <p>13           MR. BOWERS: I know, it doesn't.</p> <p>14           MR. TOTH: And if I may.</p> <p>15           MR. BOWERS: And I recommend to all</p> <p>16 my clients, anyhow, that they put a CO2 tester.</p> <p>17 In fact, it should be regulated by the NBIC, which</p> <p>18 it has. Now it's fallen back to the State.</p> <p>19           MR. TOTH: And I definitely see</p> <p>20 where you're coming from, Mr. Bowers, on that.</p> <p>21 The only thing that I would -- the caveat I would</p> <p>22 add onto that is what is causing that CO2</p> <p>23 emission.</p> <p>24           MR. BOWERS: Oh, yeah.</p> <p>25           MR. TOTH: CO2 emission is coming</p>
<p style="text-align: right;">Page 200</p> <p>1 from that boiler in more cases than not.</p> <p>2           MR. BOWERS: Well, I agree it's</p> <p>3 needed.</p> <p>4           MR. BAUGHMAN: And so</p> <p>5 jurisdictional-wise in the state of Tennessee, am</p> <p>6 I correct that it falls under the fire</p> <p>7 marshal's...</p> <p>8           MR. O'GUIN: Fire marshal has got</p> <p>9 some. They've got a few counties that are exempt</p> <p>10 from it. The rest of them are enforced by the</p> <p>11 state fire marshal's office. Any fired vessel --</p> <p>12 let's see what it says. There's a list of</p> <p>13 state --</p> <p>14           MR. CHAPMAN: There's, like, nine</p> <p>15 or ten of them.</p> <p>16           MR. O'GUIN: Counties exempt.</p> <p>17           MR. BAILEY: Also, Tennessee OSHA</p> <p>18 is the only OSHA jurisdiction that requires</p> <p>19 placards be posted in areas where CO is given off.</p> <p>20 Federal OSHA does not require it and no other</p> <p>21 state plan requires it, but we do.</p> <p>22           MR. O'GUIN: There's what the fire</p> <p>23 marshal's office sent me.</p> <p>24           MR. BAUGHMAN: So we've got an NBIC</p> <p>25 code.</p>	<p style="text-align: right;">Page 201</p> <p>1           MR. BOWERS: Which is very vague.</p> <p>2 All it says is put in a CO2 monitor. That's all</p> <p>3 they say. I mean, it's very vague in what they</p> <p>4 put out there.</p> <p>5           MR. TOTH: And that's why I felt</p> <p>6 the need and, I think, the board members here felt</p> <p>7 the feed that it addresses and gets more specific</p> <p>8 as to what are those requirements.</p> <p>9           MR. O'GUIN: Chairman?</p> <p>10           CHAIRMAN MORELOCK: Yes.</p> <p>11           MR. O'GUIN: Those counties there,</p> <p>12 they said, had local codes they'll enforce, and so</p> <p>13 the state fire marshal's office don't enforce in</p> <p>14 those counties.</p> <p>15           CHAIRMAN MORELOCK: Yeah. And, I</p> <p>16 mean, that's part of our process safety when we</p> <p>17 put in a process, is to make sure you're</p> <p>18 monitoring CO, CO2, all these other things that</p> <p>19 come off of that process.</p> <p>20           I'm not opposed to that, but then</p> <p>21 you've got to have -- you almost have to have the</p> <p>22 caveat if you have existing processes that monitor</p> <p>23 and satisfy the state requirements, you don't have</p> <p>24 to do anything in addition to that.</p> <p>25           MR. O'GUIN: Yes.</p>

<p style="text-align: right;">Page 202</p> <p>1 MR. BAUGHMAN: It's interesting.</p> <p>2 MR. TOTH: Well, a lot of these</p> <p>3 requirements that you're seeing from this</p> <p>4 interpretation came specifically out of the NFPA</p> <p>5 code book on CO monitoring. And a very nice,</p> <p>6 white page that was written by a member of the</p> <p>7 NFPA talking about CO monitoring, something that</p> <p>8 really has hit the industry -- obviously been</p> <p>9 there forever -- but has really hit the industry</p> <p>10 in the past decade of the monitoring and the</p> <p>11 requirements.</p> <p>12 And I could take it from both sides,</p> <p>13 as to the responsibility, because as Chris and Sam</p> <p>14 have looked at, I mean, they've went to the fire</p> <p>15 marshal, and -- it's the same thing we did back in</p> <p>16 the day, went to the fire marshal if it was CO or</p> <p>17 if it was gas requirements. They just don't have</p> <p>18 the enforcement. And so when we look at it,</p> <p>19 what's our responsibility, that's where the NBIC</p> <p>20 came from -- came up with it.</p> <p>21 MR. BAUGHMAN: We just had one</p> <p>22 within the last two-to-three months that put the</p> <p>23 CO monitor not only in the boiler room but out in</p> <p>24 the facility itself, and both alarmed. And there</p> <p>25 again, it went back to air intake, which is in</p>	<p style="text-align: right;">Page 203</p> <p>1 part of this inquiry. But when the air intake</p> <p>2 itself fails and there's no interlocks between the</p> <p>3 air intake and the boiler itself, it can produce</p> <p>4 CO. But we'll discuss that as it gets down to it.</p> <p>5 But yeah, more deaths and injuries each year</p> <p>6 attributed to CO poisoning than there are boiler</p> <p>7 pressure vessel accidents.</p> <p>8 MR. TOTH: And one of the things</p> <p>9 that I found during my research on this is that --</p> <p>10 one would think -- that a number that has</p> <p>11 increased over the past ten years, has doubled,</p> <p>12 nearly tripled, over the past ten years in</p> <p>13 reported CO2 incidents, would think, oh, my</p> <p>14 goodness, we've got units out there that's</p> <p>15 spitting out -- I keep saying CO2 -- keeps</p> <p>16 spitting out CO, and that's not the case. They've</p> <p>17 always been doing it. It's just now we have</p> <p>18 better monitoring systems in place.</p> <p>19 So now they're able to attribute it.</p> <p>20 So the fire departments that are getting called</p> <p>21 out because of these alarms, we didn't have that</p> <p>22 monitoring, you know, a decade ago or nobody</p> <p>23 really paid it as much attention, and now the fire</p> <p>24 department is getting called out. And so that's</p> <p>25 where those numbers have increased. And you talk</p>
<p style="text-align: right;">Page 204</p> <p>1 to the fire experts, that's what they're saying,</p> <p>2 is that it's not an increase in the amount of</p> <p>3 units that are releasing more CO to the</p> <p>4 environment. Because we all know in this</p> <p>5 industry, the actual technology has helped to</p> <p>6 limit those, but they're still there.</p> <p>7 So just know that these did come from</p> <p>8 the requirements that are within the NFPA for</p> <p>9 monitoring.</p> <p>10 MR. BAUGHMAN: I'm seeing at some</p> <p>11 point, we get into this issue on CO is we're kind</p> <p>12 of working on the back side of it, putting a</p> <p>13 monitor in. And CSD-1 says we should tune the</p> <p>14 burner every so often. But CO is a byproduct of</p> <p>15 combustion which starts at the burner. And</p> <p>16 there's not a lot that addresses that front side.</p> <p>17 We make recommendations, nonmandantory within ASME</p> <p>18 and CSD-1, but we've got all these things that are</p> <p>19 taking the end of it, which is great, it's a</p> <p>20 starting point. But we're not addressing</p> <p>21 chimneys, which is a huge issue, as we've</p> <p>22 discussed with quite a few of us in the past of</p> <p>23 the wrong chimneys that let that CO migrate into</p> <p>24 the boiler room or the existing facility.</p> <p>25 So there's a lot of things that we'll</p>	<p style="text-align: right;">Page 205</p> <p>1 take one step at a time, but at least we're</p> <p>2 looking at the CO monitoring. But at some point</p> <p>3 in time, I'd love to be an advocate in some other</p> <p>4 respects.</p> <p>5 MR. TOTH: And to piggyback on</p> <p>6 that, and then we can move forward, is that I</p> <p>7 agree 100 percent. The combustion is happening at</p> <p>8 the burner itself. For those that are aware, even</p> <p>9 at that burner, even at complete combustion, there</p> <p>10 is CO that is being produced.</p> <p>11 And the issue that you run into is a</p> <p>12 situation where if we are doing O2 monitoring --</p> <p>13 we'll see that later on -- O2 monitoring, we're</p> <p>14 doing that on the back end, okay, as it's going</p> <p>15 out the stack; whereas we could have a situation</p> <p>16 that occurred through gaskets and on the fire side</p> <p>17 that are leaking out because of higher pressure,</p> <p>18 and on that, leaking out into the boiler room, it</p> <p>19 can be on that -- that first, that turn of the</p> <p>20 first, the second pass on the fire tube boiler, or</p> <p>21 even outside of a casing of a water tube boiler,</p> <p>22 that can emit a lot more CO than what we would</p> <p>23 find at the end of the flue cycle.</p> <p>24 MR. BAUGHMAN: So what we find in</p> <p>25 the industry is not so much even on the forced</p>

<p style="text-align: right;">Page 206</p> <p>1 draft but on atmospheric where you have a  2 negative air pressure and they're not pulling all  3 their combustion air in from outside. And then,  4 of course, you're taking anything that's being  5 expelled right into the room itself. And those  6 are just operational issues that we work with in  7 the industry. But some of those -- some of these  8 alarms are going to be going off, which is great,  9 they need to attend to them, but I know of quite a  10 few boiler rooms that they're going to be going  11 off quite a bit.</p> <p>12 MR. TOTH: That's good. That's a  13 good thing.</p> <p>14 MR. BAUGHMAN: So in this, nowhere  15 does it designate -- and it's by EPA requirements  16 and AGA requirements -- on what the CO monitor  17 level needs to be at. We're talking about  18 installation and BTUs and what have you, but we've  19 not identified within that alarm also. And  20 there's variances between what Home Depot  21 supplies, Lowe's supplies, others in the industry  22 that have higher ends. But there's variances in  23 that CO monitor itself or the CO alarm, and I'd  24 like to be able to have that information available  25 as we move forward, if we move forward, to be able</p>	<p style="text-align: right;">Page 207</p> <p>1 to advise what that alarm needs to be set at.</p> <p>2 MR. TOTH: And that's a good point.</p> <p>3 Because the exposure rates of CO, it's going to  4 vary as to what conditions. As I mentioned to in  5 my lead-in, that we have a lot of situations where  6 people are exposed to CO long periods of time,  7 having illness, not understanding what those  8 illnesses were. And when you start looking at  9 those levels, you're looking at 50 ppm of  10 exposure.</p> <p>11 Now, when you start getting in the  12 higher levels, it's almost as -- yeah, absolutely.  13 And, you know, no pun intended. That's exactly  14 what's going to happen, is that you're going to  15 walk in there and it's going to overcome you.  16 Because, contrary to popular belief, there's a  17 couple of things that I'd like to mention. Number  18 one is that CO is colorless and odorless. Okay?  19 We always associated with the smell of combustion  20 gases. Why? Because it's usually mixing  21 together. But it's not. It's colorless and  22 odorless. So if you go into a situation and there  23 are high enough levels, you can be exposed to it  24 for a matter of seconds and be unconscious.</p> <p>25 The other thing is understanding that</p>
<p style="text-align: right;">Page 208</p> <p>1 we see it when we look at where they're going to  2 be placed within the boiler room. There's a  3 misconception that CO gases is heavier than air,  4 that it's going to sink, but it's not. So let's  5 think about the concept of that, too, is that if  6 we take natural gas, natural gas is lighter than  7 air, you release it, it's going to go up. Well,  8 if we're combustion, natural gas, it, too.</p> <p>9 So CO is actually just slightly  10 lighter than air, so it's going to make its way  11 up. That's why you see that the monitoring has to  12 be at a five-foot -- you know, the requirement at  13 a five-foot level or above so that we're not  14 taking and plugging into a wall socket here.  15 Because for that to be reading in that wall  16 socket, that whole room has to fill up.</p> <p>17 MR. BAUGHMAN: So my question,  18 then, gets back to the original, was the  19 requirements on what we talked to them about. And  20 there's requirements in the industry, ASHRAE, EPA,  21 AGA of either 30 or 35 is the typical for an  22 enclosed occupied space for a given amount of  23 time. And we've actually got CO in Nashville in  24 our own air that gets above some requirements  25 sometimes. It's just kind of interesting to</p>	<p style="text-align: right;">Page 209</p> <p>1 contemplate. But it needs to be identified so  2 that as we're giving these recommendations out, if  3 we decide to, that we need to know what numbers --  4 the customer is going to ask, well, is there a  5 specific? Well, we don't want to tell them yeah,  6 go out and get one that's set at a hundred or what  7 have you. We need to have something specific, I  8 believe.</p> <p>9 MR. BOWERS: Well, you can make  10 this thing way overcomplicated. You know, you  11 can't go -- you don't think the state inspectors  12 go out there, you've got this Lowe's 6500 and you  13 can't use that one. You've got to use a Home  14 Depot. I mean, you could have a book on monitors.  15 It's just not going to be enforceable.</p> <p>16 MR. BAUGHMAN: Well, I'm just  17 talking about the limits, the ppm limits. I'm not  18 talking about the brands or whatever. I'm just  19 talking about whoever they want to buy it from,  20 Brand A through Z, but it needs to be set at 30 or  21 35.</p> <p>22 MR. BOWERS: So you're saying --  23 well how do we know what they're set at the  24 stores?</p> <p>25 MR. BAUGHMAN: It gives it. It's</p>

<p style="text-align: right;">Page 210</p> <p>1 on the label.</p> <p>2 MR. BOWERS: But I'm sure if they</p> <p>3 sell it at the store, it's going to be all right.</p> <p>4 Are we going to monitor?</p> <p>5 MR. BAUGHMAN: Well --</p> <p>6 MR. BOWERS: Are we going to</p> <p>7 monitor the CO monitors to make sure they're</p> <p>8 adequate enough?</p> <p>9 MR. BAUGHMAN: I couldn't tell you.</p> <p>10 MR. BOWERS: I mean, it's getting</p> <p>11 overcomplicated. I mean, half the homes in the</p> <p>12 state don't have monitors. So we could go on and</p> <p>13 say, well, require it in homes.</p> <p>14 MR. BAUGHMAN: Well, here is the</p> <p>15 other end of that, Harold, too, is that we make</p> <p>16 requirements, and we list that information out.</p> <p>17 What they decide to put on, we don't necessarily</p> <p>18 know until there's an accident and the</p> <p>19 finger-pointing starts happening. But it's like</p> <p>20 we mandate you can't use rebuilt controls in our</p> <p>21 industry. Well, nobody knows if you've got a</p> <p>22 rebuilt controller or not until there's an</p> <p>23 accident and they pull it off and they look at it</p> <p>24 and go, "It's a rebuilt control."</p> <p>25 So we have requirements, and all we</p>	<p style="text-align: right;">Page 211</p> <p>1 can do is lay that out. I don't know if it's</p> <p>2 necessarily up to our inspectors to look at that</p> <p>3 ppm.</p> <p>4 MR. BOWERS: Once the State sticks</p> <p>5 their thing into it and says, well, we want 3500</p> <p>6 and above; someone dies at 2500 and says state guy</p> <p>7 said it was all right at 3500. You don't want to</p> <p>8 get overcomplicated into us deciding which CO</p> <p>9 monitor that the owner can use or not use.</p> <p>10 MR. TOTH: Again, if I may, it goes</p> <p>11 back to what the acceptable amounts are. I think</p> <p>12 Mr. Baughman made a really good point. Normal</p> <p>13 levels that are not going to cause an alarm are</p> <p>14 going to be in that 30 to 35 ppm range.</p> <p>15 NFPA looks at it -- National Fire</p> <p>16 Protection Association -- looks at it, at anything</p> <p>17 over 50 ppm and above can cause illness. Okay?</p> <p>18 So what I think Mr. Baughman -- and I don't mean</p> <p>19 to speak for him -- this is very easily</p> <p>20 controlled, no different than what -- in our last</p> <p>21 discussion about the e-stops, is that there is a</p> <p>22 revision to the permit manual that stipulates at</p> <p>23 what level we need to have an alarm. And if that</p> <p>24 level is that the max level is 35 ppm, then that</p> <p>25 detector has to be able to register an alarm if</p>
<p style="text-align: right;">Page 212</p> <p>1 35 ppm is exceeded. It doesn't mean that they get</p> <p>2 the one from Lowe's or they get Johnson Control</p> <p>3 out here to run them. It doesn't matter. It just</p> <p>4 really matters where it is located in the boiler</p> <p>5 room, because where are most plugs going to be</p> <p>6 located in the boiler room? It's going to be</p> <p>7 located about two foot off the ground.</p> <p>8 And so if this body puts it out there</p> <p>9 and says, well, here's the interpretation and said</p> <p>10 where's it going to be located? It's got to be</p> <p>11 able to monitor an alarm at this limit, whatever</p> <p>12 one they use, if it's a hardwire or if it's a plug</p> <p>13 in to a socket, it's got to be satisfactory per an</p> <p>14 FP72.</p> <p>15 MR. BOWERS: Yeah, but that</p> <p>16 addresses 12,500 and above.</p> <p>17 MR. TOTH: No. No. No. You're</p> <p>18 speaking of NFPA 85, which is 12.5 million. This</p> <p>19 is something totally different.</p> <p>20 MR. ROBINSON: I would be</p> <p>21 interested to see if the National Board would</p> <p>22 consider making changes. And the reason being is</p> <p>23 because, Brian -- Mr. Chairman, Marty, you guys</p> <p>24 are National Board members, and, you know, I've</p> <p>25 been a member of ASME at one point in time in my</p>	<p style="text-align: right;">Page 213</p> <p>1 life, and we used to sit around the table and</p> <p>2 discuss issues like this. And for this to be a</p> <p>3 one-liner is very ambiguous. I think that they</p> <p>4 may want to come back and, at least, clean it up a</p> <p>5 bit, because this is so broad.</p> <p>6 MR. TOTH: So what I've -- in a</p> <p>7 very easy or quick way of doing it -- I wasn't</p> <p>8 checking my email, by the way -- is that I was</p> <p>9 looking -- that coming from the American Society</p> <p>10 of Heating and Refrigeration, they stipulate in</p> <p>11 theirs that the EPA is set for one hour of</p> <p>12 exposure, a maximum of 35 ppm. Eight hours of</p> <p>13 exposure, direct exposure, is 9 ppm. Because the</p> <p>14 more you're exposed to it, the more it's going to</p> <p>15 start to affect you. And so that's a quick</p> <p>16 search.</p> <p>17 So when we talk about it, we set it</p> <p>18 here, or you, the board, sets it here and says you</p> <p>19 have to have CO monitoring. Then you put it back</p> <p>20 on the Boiler Unit to do the research of what is</p> <p>21 that threshold. And then in the permitting, you</p> <p>22 establish what is that threshold requirement for</p> <p>23 the monitors. And then when they go to the point</p> <p>24 of doing installs, and then how do you enforce it</p> <p>25 from here on when you go into those boiler rooms,</p>

<p style="text-align: right;">Page 214</p> <p>1 you have a baseline. Just my recommendation.</p> <p>2 I really think we could probably move</p> <p>3 forward or we could table this until March to give</p> <p>4 you more opportunity. It's completely up to you.</p> <p>5 MR. ROBINSON: One comment. Would</p> <p>6 it be prudent to submit a code question to the</p> <p>7 National Board and ask them for more</p> <p>8 clarification?</p> <p>9 MR. TOTH: It could. The problem</p> <p>10 is, is that when you -- the process of submitting</p> <p>11 that comes in as an interpretation; that</p> <p>12 interpretation has to be put forth before the</p> <p>13 subcommittee; the subcommittee has -- it goes into</p> <p>14 the subgroup; the subgroup looks at it and then</p> <p>15 sends it on to the subcommittee; the subcommittee</p> <p>16 looks at it and sends it on to the main committee;</p> <p>17 the main committee may or may not vote on it. It</p> <p>18 may get kicked back. The next thing you know</p> <p>19 you're two years down the road trying to figure</p> <p>20 out, when you can handle the situation now and</p> <p>21 then adjust as needed. But again, that's --</p> <p>22 CHAIRMAN MORELOCK: Well, I'm a</p> <p>23 part 3 person on NBIC. So what does part 1 say?</p> <p>24 MR. TOTH: That's what part 3 says.</p> <p>25 Part 3 is very specific. It reads</p>	<p style="text-align: right;">Page 215</p> <p>1 that it has to have -- I've actually mentioned it</p> <p>2 here.</p> <p>3 CHAIRMAN MORELOCK: Well, I mean,</p> <p>4 like on installation. What's installation</p> <p>5 requirements for that?</p> <p>6 MR. BOWERS: It's very vague, isn't</p> <p>7 it?</p> <p>8 MR. TOTH: It is very vague. And</p> <p>9 again, the verbiage reads the owner-user shall</p> <p>10 install a carbon monoxide detector/alarm in</p> <p>11 equipment rooms where fuel-fired boilers -- now,</p> <p>12 remember, we're talking about fuel-fired boilers.</p> <p>13 Let's not go and put them in electric boilers --</p> <p>14 fuel-fired boilers and/or fuel-fired pressure</p> <p>15 vessels, such as heat-recovery steam generators,</p> <p>16 are located in accordance with the authority</p> <p>17 having jurisdiction.</p> <p>18 MR. BAUGHMAN: Well, and then that</p> <p>19 gets over into, again, authorities having</p> <p>20 jurisdiction on -- we've got fire marshals. It</p> <p>21 falls within the fire marshals' jurisdiction also.</p> <p>22 So we've got this overlap that we're discussing on</p> <p>23 whether we're stepping to the plate and taking</p> <p>24 charge of this. And that's something that we need</p> <p>25 to think about, too, is do we take this on just</p>
<p style="text-align: right;">Page 216</p> <p>1 because it's in NBIC, or do we shirk that and put</p> <p>2 that to the jurisdiction that it already has in</p> <p>3 place, the responsibility, expect that where</p> <p>4 there's exemptions of installing this stuff, so...</p> <p>5 MR. BOWERS: Well, I think we have</p> <p>6 taken it on with the NBIC. It's now how far do we</p> <p>7 want to go with it. And I think we have different</p> <p>8 levels here. We could go through these individual</p> <p>9 ones. I think most of us are in agreement</p> <p>10 something needs to be done. Now it's a question</p> <p>11 of what degree do we want to go, you know. It's</p> <p>12 like, how far do we want to go with it.</p> <p>13 MR. TOTH: And again, it's</p> <p>14 really -- you could answer this interpretation by</p> <p>15 coming back and saying that's beyond the authority</p> <p>16 of this body and -- but that's not really true. I</p> <p>17 mean, it's really -- if you want to pass it off on</p> <p>18 the fire marshals, okay.</p> <p>19 MR. BOWERS: No.</p> <p>20 MR. TOTH: Is it being enforced and</p> <p>21 do we find there's an issue -- I'm going to tell</p> <p>22 you, NBIC didn't put this in part 1 just because</p> <p>23 somebody just threw it up -- I mean, same thing</p> <p>24 happened with what, with the CO2 storage tanks.</p> <p>25 It's because there were actual fatalities that</p>	<p style="text-align: right;">Page 217</p> <p>1 occurred because of it, and so then they started</p> <p>2 putting that in the NBIC.</p> <p>3 MR. ROBINSON: They came back with</p> <p>4 greater detail.</p> <p>5 MR. BAUGHMAN: Well, and I guess my</p> <p>6 question is going to be is that there's counties</p> <p>7 and cities that are exempt, but there again, we're</p> <p>8 going to go back in, if we adopt this, and say no,</p> <p>9 you're not exempt. We've got to put them in</p> <p>10 across the board within the boiler end of things.</p> <p>11 MR. TOTH: Let's -- yeah. And, you</p> <p>12 know, that actually goes down to everything. If</p> <p>13 you look in our statute -- and Mr. Bailey can</p> <p>14 attest to this -- is that this law, this rules and</p> <p>15 regulations, can be actually overextended or --</p> <p>16 what's the legal word I want to use? So local</p> <p>17 jurisdiction can have their own law. We had that</p> <p>18 in the city of Memphis for years. And so as long</p> <p>19 as they have a local requirement that, at least,</p> <p>20 satisfies the board's requirements, then they can</p> <p>21 enforce as they see fit. You're absolutely right.</p> <p>22 You've got to put it out there first.</p> <p>23 I'll do whatever y'all need to do. I</p> <p>24 really think -- I'll be honest with you -- I</p> <p>25 really think that this is a great opportunity to</p>

<p style="text-align: right;">Page 218</p> <p>1 put this aside and you guys really digest it and 2 look into it, give the Boiler Unit an opportunity 3 to get some of those numbers. 4           And I imagine, you know, Mr. O'Guin 5 and Mr. Chapman over there, I imagine they've 6 already received a lot of information that came 7 through. 8           Fire marshal's a lot more 9 residential. Residential has been there a long 10 time when it came to CO monitoring. Those local 11 industries, not so much. And so now they're 12 starting to enforce it. I bet they can come up 13 with those figures of what that threshold is, and 14 then you go back and you look at it, and in the 15 meantime, you know, we'll be out there in January. 16 Maybe we'll have a little discussion. Mr. Morelock 17 and I both sit on the main committee. 18           This is why a lot of this stuff we 19 don't see, because he and I are sitting in on 20 repairs and alterations while they're over here 21 talking about installations. 22           CHAIRMAN MORELOCK: Right. 23           MR. TOTH: And so we'll have an 24 opportunity in January to maybe have some 25 discussion with those installation guys and</p>	<p style="text-align: right;">Page 219</p> <p>1 seeing, you know, what was their mindset, where 2 did this come from, and then be able to come back 3 in March and really answer this. 4           CHAIRMAN MORELOCK: Well, in 5 industry, you know, you've got process safety 6 management, which is mandated by OSHA 19-10. And 7 outside of all this, which is excellent 8 information, if you sit down and do a hazardous -- 9 process hazards analysis and all that, that 10 process is going to accomplish this and maybe even 11 more stringently. So again, you've got your 12 laundries that need it, you've got chemical 13 companies and tire manufacturers, and they may 14 already have it just through their normal process 15 safety management process. 16           So I think it's good. I agree with 17 you. My question to the board is do you want to 18 vote these individually now, or what's your 19 pleasure? 20           MR. BOWERS: I think we should go 21 through them, you know. If we have any concerns, 22 that way we can work on the concerns. At least we 23 go through them, and there's some of them I think 24 it's probably just easy to go through and we'll 25 have a lot in agreement, and there's probably a</p>
<p style="text-align: right;">Page 220</p> <p>1 few things in there we don't have agreement on. 2           CHAIRMAN MORELOCK: Because, I 3 mean, it's either that or we table it until March 4 and you come back ready then. 5           MR. BAUGHMAN: March is going to be 6 a pretty thick agenda, it sounds like, so either 7 way, I think that we can have discussion on them. 8 But it doesn't look like we're going to actually 9 vote. Or we might vote on certain items in here 10 and get it narrowed down to where we get some of 11 these questions actually resolved and put to bed, 12 and maybe our discussion in March will be shorter. 13           CHAIRMAN MORELOCK: Okay. All 14 right, then, let's proceed. 15           So as far as Inquiry 1 goes, is it 16 required to have a CO detector/alarm in a boiler 17 room or space containing a boiler that has a 18 fuel-firing energy input of greater than or equal 19 to 100,000 BTUs per hour? 20           And the reply is yes. 21           MR. BAUGHMAN: So my question on 22 that is does that come from the NFPA-72, or is 23 that jurisdictional for us just because of our 24 permitting requirements? 25           MR. TOTH: It comes from us.</p>	<p style="text-align: right;">Page 221</p> <p>1           MR. BAUGHMAN: Okay. 2           MR. TOTH: Yeah, because that is 3 what the Boiler Unit inspects. So if you had a 4 water heater that has 75,000 BTUs, they're not 5 going to have anything to do with that. 6           MR. BAUGHMAN: Sure. But ASME 7 doesn't come into play until 200,000. And CSD-1 8 is not until 400,000. But we're doing this 9 strictly because of the permitting that was set 10 up, not by any other code requirements other than 11 that. 12           MR. TOTH: Yeah. Because NFPA is 13 talking about any fired unit. They say any unit. 14 And what we say is we limit it down to what does 15 the Boiler Unit inspect. The boiler unit inspects 16 anything greater than or equal to 100,000 BTUs. 17 But the NFPA says any unit. I mean, it can be 18 50,000 BTUs they're requiring. Their requirements 19 cover that as well. 20           CHAIRMAN MORELOCK: But they're 21 looking at fireplaces in houses. 22           MR. TOTH: They're looking at 23 everything. They're looking at fireplaces, 24 houses. They're looking at -- 25           CHAIRMAN MORELOCK: Well, I mean,</p>

<p style="text-align: right;">Page 222</p> <p>1 you could have a fireplace and put 30- to 2 50,000 --</p> <p>3 MR. TOTH: They're looking at 4 potable water heaters, et cetera.</p> <p>5 MR. PARHAM: Dave Parham with 6 Travelers. Are we talking about new 7 installations, or already installed items, you 8 know, from 20 years ago?</p> <p>9 MR. TOTH: Those are definitely the 10 ones we want to look at.</p> <p>11 MR. PARHAM: Are those going to be 12 grandfathered in or...</p> <p>13 MR. BAUGHMAN: I would say not.</p> <p>14 CHAIRMAN MORELOCK: No.</p> <p>15 MR. PARHAM: And if I may ask 16 another question, at what point do I become the 17 inspector? I'm looking at it from the inspector 18 profile. At what point do I become an inspector 19 of CO monitors? I mean, I ask them, "Okay. Do 20 you have a CO monitor here?"</p> <p>21 And he says, "Why, yeah. It's right 22 over there." I look over there and there's a 1975 23 Kmart blue-light special hanging on the wall. 24 It's plugged in or it's hardwired in, but do I go 25 over there and check and make sure that thing is</p>	<p style="text-align: right;">Page 223</p> <p>1 accurately monitoring? At what point do I become 2 the inspector of the CO2 monitor?</p> <p>3 MR. BOWERS: Well, I agree with 4 you, we need to make it simple. If they have it, 5 they have it. We don't need to come in there and 6 be testing CO monitors to make sure they're --</p> <p>7 MR. PARHAM: It's like a fire 8 extinguisher. Right now I look and say, "Okay. 9 They've got a fire extinguisher." But I do not go 10 over there and make sure it's the A, B, C, D -- I 11 don't know what the difference is on them.</p> <p>12 MR. TOTH: You're right.</p> <p>13 MR. BAUGHMAN: Well, and these 14 inspectors are pressure vessel inspectors. And 15 that's where we get into issues of the chimney. 16 The chimney is external of the pressure vessel. 17 It's integral to it, but we get into those 18 discussions. And I had some interesting 19 discussions with Brother Tanner years ago on that 20 particular issue, and it was a fairly one-sided 21 discussion, but it was a discussion all the same.</p> <p>22 But that's a great point that you 23 make, is all you can do is look and say, "Do you 24 have this item?" Yes. No. Boom.</p> <p>25 MR. TOTH: And that's why I can</p>
<p style="text-align: right;">Page 224</p> <p>1 see -- and that's a very good point, Dave -- is 2 that nothing in this interpretation talks about 3 inspections of the CO monitor; it's verification 4 that they actually have one. To test to see if it 5 operates, pushing a button to see if it blows a 6 horn doesn't necessarily mean -- but all you're 7 doing is verifying that it is audible.</p> <p>8 Again, this is not intended for 9 inspection and service. Don't get me started on 10 pressure vessel inspectors.</p> <p>11 MR. BAUGHMAN: So the question 12 being 100,000 BTUs, above 100,000 BTUs is what 13 we're voting on.</p> <p>14 MR. TOTH: Yes.</p> <p>15 CHAIRMAN MORELOCK: Okay. Any more 16 discussion? All in favor say aye.</p> <p>17 (Affirmative response.)</p> <p>18 CHAIRMAN MORELOCK: Opposed?</p> <p>19 (No verbal response.)</p> <p>20 CHAIRMAN MORELOCK: Abstentions, 21 not voting?</p> <p>22 (No verbal response.)</p> <p>23 CHAIRMAN MORELOCK: That one 24 passed.</p> <p>25 Inquiry Number 2, if Inquiry Number 1</p>	<p style="text-align: right;">Page 225</p> <p>1 is yes, does this requirement include both high- 2 and low-pressure boilers?</p> <p>3 The proposed reply is yes. 4 Any discussion on that?</p> <p>5 (No verbal response.)</p> <p>6 CHAIRMAN MORELOCK: All in favor 7 say aye.</p> <p>8 (Affirmative response.)</p> <p>9 CHAIRMAN MORELOCK: Opposed?</p> <p>10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: Abstentions, 12 not voting?</p> <p>13 (No verbal response.).</p> <p>14 CHAIRMAN MORELOCK: That one 15 passed.</p> <p>16 Inquiry 3, if Inquiry 1 is yes, are 17 unfired steam/water boilers utilizing the fired 18 fuel waste heat combustion gases, for example, 19 heat recovery steam generator as an energy source, 20 as its energy source required so?</p> <p>21 The reply is yes.</p> <p>22 MR. TOTH: I probably can wordsmith 23 that a little bit better.</p> <p>24 MR. BAUGHMAN: Well, one -- so 25 we've got -- I've known some installations over</p>

<p style="text-align: right;">Page 226</p> <p>1 the years that the waste heat stream diverted out  2 of the boiler room itself into a separate room  3 where the steam or hot water was generated out  4 through the unfired heater. So that being the  5 case, the boiler room itself will have one, but  6 being that it's in a separate room, would we  7 mandate that separate room that has no fuel source  8 with that? And that could be a waiver again, that  9 you could be able to go back and apply for. But  10 there again, we could arbitrarily say yeah,  11 regardless of where it's at, you've got to do it,  12 but yet if there's no combustion gases in that  13 room, it doesn't make sense to apply the CO  14 monitor. That is a very minute number of  15 installations out in the field, but I wanted to  16 make sure that I brought it up because it can and  17 has been encountered before. And if it does, how  18 do we address that back through our enforcement?  19 MR. TOTH: Well, the concern that  20 you're going to see that was addressed in the NBIC  21 and also in the NFPA is the concern of the  22 ductwork that takes those combustion gases to the  23 heat exchanger. And if there's a possible leak  24 within that ductwork, taking it to the exchange  25 room.</p>	<p style="text-align: right;">Page 227</p> <p>1 MR. BAUGHMAN: That makes sense.  2 MR. TOTH: You may have it fine  3 coming out of the boiler, but then when it's  4 routed into another space that has that is where  5 you could possibly get escape of the CO.  6 MR. BAUGHMAN: I agree. I see  7 that.  8 MR. BOWERS: But at that location,  9 they're not producing any CO, at that location.  10 MR. TOTH: Okay. But we have to  11 understand, where is the CO? The CO is actually  12 in the combustion stream. And so that combustion  13 stream -- okay. Let's take a car in the garage  14 and you take a hose pipe and you put it into the  15 tailpipe of the car and then you run it into the  16 car, well, the inside of the car is not producing  17 it, but the gases are coming in, right? So that's  18 the concept, is that if it runs into the other  19 space, so, too, does any possible CO that's in  20 that boiler stack so, too, is going to run into  21 that ductwork.  22 MR. BOWERS: But if that stack is  23 in good shape, it shouldn't be a problem. The  24 stack is supposed to be in good shape. I mean,  25 I'm saying if you have a stack that's going</p>
<p style="text-align: right;">Page 228</p> <p>1 through multiple roofs, are you going to put a CO  2 on every level? Because you've got the stack  3 going through there. Or are you going to follow a  4 combustion line through several rooms that every  5 room that stack -- every room that line goes  6 through has to have a monitor? I mean, you could  7 go on and on.  8 MR. TOTH: We can go deeper into  9 NFPA and find that. With that requirement, I do  10 recall during my research that it did address,  11 okay, communication chambers. But I didn't -- I  12 just pretty much added it to here and say wherever  13 it's going into the heat recovery steam generator,  14 based on the fact that the NBIC spelled it out.  15 If the NBIC didn't say heat recovery steam  16 generators, I'll be completely honest with you  17 guys, it probably wouldn't have crossed my mind.  18 MR. BAUGHMAN: Well, I'm thinking  19 CO from the combustion source, but understanding  20 it's following the path of exit with the  21 combustion gas, so I understand the inquiry now  22 better.  23 MR. TOTH: But I think what  24 Mr. Baughman's suggestion, too, if you wanted to  25 put that into the permit, that it allowed for a</p>	<p style="text-align: right;">Page 229</p> <p>1 waiver to be addressed and applied for, I don't  2 see that there's any problem with that.  3 MR. BAUGHMAN: I kind of rescind  4 that, actually.  5 MR. TOTH: Don't do that to me.  6 MR. BAUGHMAN: Thank you.  7 MR. O'GUIN: There's the NBIC  8 carbon monoxide code if you want to read it.  9 MR. TOTH: Chris, was that what I  10 had read out loud?  11 MR. O'GUIN: Yes, sir. NBIC  12 Part 1.  13 MR. BAUGHMAN: So what we find on  14 the chimney are stacks that I've got issues with  15 in the field. It goes by manufacturers'  16 recommendations, and I've seen manufacturers'  17 recommendations that were incorrect.  18 Jurisdictional requirements -- our  19 jurisdictional requirement goes back to the  20 manufacturers' recommendations. And that's an  21 issue that I have. But at any rate, for this, I  22 think I'm pretty good with understanding it.  23 CHAIRMAN MORELOCK: Well, I think  24 our scope is going to have to end at the boiler  25 proper. Yeah, if it's being piped through</p>

<p style="text-align: right;">Page 230</p> <p>1 buildings, that's a process safety issue right 2 there. Do you agree? 3 MR. TOTH: Oh, yeah. I mean, I 4 agree. You know, talking about going through 5 communication chambers and stuff like that, yeah, 6 that's a little much. Again, as I reference, a 7 heat recovery steam generator only because it's 8 spelled out in the NBIC. 9 CHAIRMAN MORELOCK: Yes. Okay. 10 Any more discussion on 3? 11 MR. BAUGHMAN: So is the thought to 12 that -- were you saying to change that, in your 13 mind, to no, or what's our recommendation or 14 thought process to that? Are we leaving it to the 15 boiler room, or what are we -- I was following 16 your conversation, but -- 17 CHAIRMAN MORELOCK: Well, I mean, 18 if you've got a heat recovery steam generator, 19 you've got to monitor it. 20 MR. BAUGHMAN: If it's in a 21 different room? 22 CHAIRMAN MORELOCK: And if there's 23 a stack associated with the boiler, I mean, you've 24 got to consider that. But theoretically, if 25 that -- like, with the heat recovery, once you run</p>	<p style="text-align: right;">Page 231</p> <p>1 it through that heat exchanger and up the stack, 2 that should be part of the boiler. But anything 3 after that should be a process safety issue. 4 MR. BOWERS: So I would say my 5 opinion would be no on that one. 6 CHAIRMAN MORELOCK: On 3? 7 MR. BOWERS: My opinion. 8 MR. TOTH: And that's great, if you 9 choose to do that, if I may add. But, Mr. Bowers, 10 let's talk about where you and I first met eons 11 ago. We won't talk about how many years it's 12 been. But you actually had a heat recovery steam 13 generator. 14 MR. BOWERS: Yes. 15 MR. TOTH: Yes. And so what 16 happened was it was a roaster process to extract 17 minerals. And then the exhaust came off of that. 18 The exhaust, instead of expelling it into the 19 atmosphere, actually traced back to a heat 20 recovery steam generator which you used to create 21 steam. So that duct work, if that was -- which 22 yours wasn't -- but if you had a situation where 23 you did have that heat recovery steam generator 24 inside, was there still as much of a potential, if 25 the roaster was outside and the duct work was</p>
<p style="text-align: right;">Page 232</p> <p>1 inside, was there a potential for carbon monoxide 2 infiltrating that space? 3 MR. BOWERS: Yeah. Probably if the 4 other gases didn't get in, but yeah. 5 MR. TOTH: Right. So that's where, 6 I guess, the situation comes in as to, okay, if we 7 have it outside, do we need CO monitors? No. It's 8 inside. 9 So if we have a boiler that's 10 outside, even a boiler sitting on a trailer 11 outside, does it require CO monitoring? No. 12 So it goes back to what you said, and 13 that's why I don't want you to give up too quick 14 on it. It still gives an opportunity for the 15 Boiler Unit to give a waiver in that. You see? 16 MR. BAUGHMAN: (Nods head.) 17 MR. TOTH: Or to word these 18 inquiries just to highlight boilers that are 19 internal, I wouldn't do that. I would do it the 20 way that you suggested, which is 99.9 percent are 21 going to be inside, and then you have a few 22 percent that apply and say, "I'm outside. Do I 23 really need a CO monitor?" 24 Does that make sense? 25 CHAIRMAN MORELOCK: Have you got</p>	<p style="text-align: right;">Page 233</p> <p>1 thoughts, Terry? 2 MR. FOX: I agree with what Marty 3 is saying right there. But if one is located 4 inside a building, yes, it needs a CO monitor. 5 CHAIRMAN MORELOCK: I agree. 6 MR. O'GUIN: Well, the NBIC code 7 states equipment room, so, I mean, that's telling 8 you inside -- 9 MR. FOX: Inside, it needs a 10 monitor. That's my opinion. 11 MR. TOTH: I just wanted to make 12 sure, Mr. Chairman, that the recorder actually got 13 Mr. Fox saying that I was correct. 14 MR. BAUGHMAN: I didn't hear that. 15 MR. FOX: No. I said I agreed. 16 MR. TOTH: Oh, agreed, not correct. 17 Got you. All right. Thank you. 18 CHAIRMAN MORELOCK: Okay. So are 19 we at yes or no on Number 3? 20 (Affirmative response.) 21 CHAIRMAN MORELOCK: We're staying 22 yes. All right. I'm going to call the question. 23 All in favor say aye. 24 (Affirmative response.) 25 CHAIRMAN MORELOCK: Opposed?</p>

<p style="text-align: right;">Page 234</p> <p>1 (No verbal response.)  2 CHAIRMAN MORELOCK: Abstentions,  3 not voting?  4 (No verbal response.)  5 CHAIRMAN MORELOCK: Number 3 is  6 passed.  7 Inquiry 4, is it required to have a  8 CO detector where the boiler room or space where a  9 boiler is installed possess an upper-space  10 mechanical ventilation system that either  11 continuously operates or electrically tied to  12 operate whenever the boiler or boilers in the  13 space are firing?  14 And the reply is no  15 MR. TOTH: Now, I will say my piece  16 on this and then turn it over to Mr. Fox, because  17 I think he has some opinion on this.  18 The reason I put no in here is  19 because there are allowances within NFPA that do  20 allow for spaces that have a draw off of the  21 boiler room to be exempt from certain CO  22 monitoring based on when the pieces of equipment  23 are -- when they are firing, when the possible --  24 there's possibility of CO gases being produced.  25 If the Boiler wants to go that route,</p>	<p style="text-align: right;">Page 235</p> <p>1 then you're going down the -- you're actually  2 going down the road that NFPA allows.  3 And I guess I misspoke, because I  4 said I'm putting down the answers as to what NFPA  5 reads. And I do apologize, so I will correct  6 myself and say that there are certain requirements  7 that do allow for this to exempt spaces from CO  8 monitoring.  9 MR. BOWERS: I have a question on  10 that. Okay. You're saying that if a boiler room  11 has an exhaust fan that exhausts that room, that  12 the CO monitor should be exempt? Because I  13 remember a situation where we had a fatality in  14 the state of Tennessee 12, 13 years ago, Radisson  15 Hotel, which they had an equipment room there that  16 had a ventilation fan that vented the room. The  17 fan failed. The CO built up in the room and  18 killed a couple people next to it.  19 So I'm not sure if a CO monitor would  20 have helped in that situation or not. But is that  21 what we're talking about, a ventilated system --  22 MR. FOX: I'm sorry.  23 MR. BOWERS: Go ahead. Is that  24 what we're talking about? If it has a ventilated  25 system, but the system can fail?</p>
<p style="text-align: right;">Page 236</p> <p>1 MR. TOTH: I am going to let -- go  2 ahead and let Mr. Fox -- because I know that  3 he's --  4 MR. FOX: I've gotten into -- over  5 the years, I've dealt with a lot of boiler rooms  6 that had a negative inside or was located in a  7 hotel or something like this, on the fifth floor  8 when there's 12 floors of hotel space and the  9 boiler room was actually in the middle. And they  10 would have -- I really don't want to mention any  11 brand names, but I will -- like, T Journal and  12 exhaust systems and different type exhaust systems  13 that were never, in my opinion, installed  14 correctly, did not have differential pressure  15 switches on to ensure that that fan would come on,  16 and you would have a belt break. Or they could be  17 belt-driven and you would have a belt break.  18 Well, the motor starter is running. So you've got  19 an interlock and the motor starter is going, but  20 we have nothing to prove that we're actually  21 exhausting that building. And you would develop  22 tremendous amounts of CO in those rooms.  23 And back to the hotel that you were  24 talking about, it was almost the same situation.  25 The boiler room was located below, but the fresh</p>	<p style="text-align: right;">Page 237</p> <p>1 air make up for the whole hotel was on the roof.  2 That CO got sucked back into the fresh air make  3 up. That's what killed them people on that one.  4 I was part of that little investigation.  5 But no. I mean, I do not agree with  6 that answer. I think that even though that we've  7 got a pressurized ventilation system or whatever,  8 you should still have a CO monitor.  9 MR. TOTH: Perfect. And that's  10 where -- and as I said, this is what NFPA says.  11 NFPA actually states -- and I'm going to clarify  12 myself -- NFPA states that if you have a  13 mechanical means of ventilation or ventilation  14 that is electrically tied to the piece of  15 equipment that will automatically either start or  16 open to allow for a positive draft out of the  17 room, that you don't have to have CO monitoring.  18 MR. ROBINSON: Hey, Marty,  19 question: Could that have been meant to mean to  20 shut the boiler down in the event that the switch  21 wasn't satisfied, like a safety interlock where  22 the boiler would not start?  23 MR. TOTH: Huh-uh. Well, the thing  24 is, is that in those switches, if you have it tied  25 in, it's required for a boiler if you have a</p>

<p style="text-align: right;">Page 238</p> <p>1 mechanical louvered system. So let's not confuse 2 ourselves on combustion air versus room 3 ventilation. 4           So combustion air, if you have a 5 louvered system, that louvered system has to be 6 connected with that boiler. When that boiler 7 starts, that louvered system or that mechanical 8 combustion air system has to allow for combustion 9 air to come in. 10           What we're referring to is the 11 ventilation of the space. And the ventilation of 12 the space, as Mr. Fox alluded to when he's talking 13 about boiler rooms that are having a negative air, 14 we could go way deep into the weeds talking about 15 that today. 16           But when we're talking about negative 17 air, having negative combustion air in the room 18 can attribute to incomplete combustion which, in 19 turn, creates carbon monoxide. 20           What we're talking about is a 21 ventilation system in the room. Because as I 22 mentioned earlier, carbon monoxide gas is slightly 23 lighter than air, so it is going to work its way 24 to the top of the space. Once it works its way to 25 the top of the space, as long as it has a</p>	<p style="text-align: right;">Page 239</p> <p>1 ventilation system that pushes it out, NFPA allows 2 for that. 3           What I personally believe is that -- 4 I personally believe that you should have a carbon 5 monoxide detector, that we should not follow suit 6 with the NFPA on this, an additional line of 7 safety. 8           I hope everybody got all that, because 9 there's a lot of this. There's a lot of this. 10           MR. BOWERS: So basically, yes. 11           CHAIRMAN MORELOCK: All right. Any 12 more questions or comments? 13           MR. BOWERS: Change that to yes. 14           CHAIRMAN MORELOCK: So we've 15 changed Reply 4 to yes? 16           MR. TOTH: Yes. 17           CHAIRMAN MORELOCK: I'm going to 18 call the question. All in favor say aye. 19 (Affirmative response.) 20           CHAIRMAN MORELOCK: Opposed? 21 (No verbal response.) 22           CHAIRMAN MORELOCK: Abstentions, 23 not voting? 24 (No verbal response.) 25           CHAIRMAN MORELOCK: Number 4 is</p>
<p style="text-align: right;">Page 240</p> <p>1 passed. 2           Moving on to 5. Is it allowable to 3 install a CO detector anywhere within a boiler 4 room or space where a boiler is installed? 5           Reply is no. CO detectors shall be 6 installed no lower than five feet above the lowest 7 space in the boiler room or space containing a 8 fuel-fired boiler. 9           Questions? Commitments? 10           MR. FOX: I agree. 11           MR. BAUGHMAN: Well, and it gets 12 back, just quickly, because it is addressing the 13 boiler room or space containing a fuel-fired 14 boiler. But going back to this heat recovery 15 unit, it's not a fuel-fired boiler, so I don't 16 even know if it needs clarification. But that 17 just comes into mind, as far as the wording; it's 18 a boiler room or a space containing a fuel-fired 19 boiler, is a boiler room with the heat recovery 20 unit considered a boiler room? 21           MR. TOTH: (Nods head.) 22           MR. BAUGHMAN: Very good. 23           MR. BAILEY: Verbal answer, please. 24           MR. TOTH: Yes. 25           MR. BAILEY: Thank you.</p>	<p style="text-align: right;">Page 241</p> <p>1           CHAIRMAN MORELOCK: Any more 2 questions/comments? 3 (No verbal response.) 4           CHAIRMAN MORELOCK: I'm going to 5 call the question. 6           MR. BOWERS: So the question is 7 whenever they mount that, it's got to be... 8           CHAIRMAN MORELOCK: Five feet or 9 above. 10           MR. TOTH: Mr. Chairman, just a 11 quick elaboration -- and this is really for the 12 Boiler Unit -- is that we can have situations when 13 we run into them where you could have multiple 14 levels of where the boilers are located. So you 15 could have a boiler level that's a little bit 16 lower that you go down. It's got to be from that 17 point. 18           Even though it is lighter than air, 19 it can be -- that could go into another area. So 20 it's five feet from the lowest space to which the 21 boiler is located. 22           CHAIRMAN MORELOCK: Good 23 explanation. 24           All in favor say aye. 25 (Affirmative response.)</p>

<p style="text-align: right;">Page 242</p> <p>1 CHAIRMAN MORELOCK: Opposed?</p> <p>2 (No verbal response.)</p> <p>3 CHAIRMAN MORELOCK: Abstentions,</p> <p>4 not voting?</p> <p>5 (No verbal response.)</p> <p>6 CHAIRMAN MORELOCK: All right.</p> <p>7 That one passes.</p> <p>8 Moving on to 6, is it required for</p> <p>9 the CO detector to be hardwired electrically?</p> <p>10 The reply is no.</p> <p>11 MR. TOTH: Simply enough, it can go</p> <p>12 into an outlet plug as long as that outlet plug is</p> <p>13 five feet from the lowest level. It could be a</p> <p>14 plug-in type or --</p> <p>15 CHAIRMAN MORELOCK: Battery</p> <p>16 powered?</p> <p>17 MR. TOTH: Battery powered is a</p> <p>18 second line. Yes, it has to have -- it has to</p> <p>19 have -- and you'll see that next.</p> <p>20 CHAIRMAN MORELOCK: You're right.</p> <p>21 MR. TOTH: It has to have two means</p> <p>22 of power, one of which can be a battery power</p> <p>23 source.</p> <p>24 CHAIRMAN MORELOCK: Oh, yeah, since</p> <p>25 you have to have two means of -- okay. I'm with</p>	<p style="text-align: right;">Page 243</p> <p>1 you.</p> <p>2 MR. TOTH: So one would be the</p> <p>3 alternating current that's coming into it from an</p> <p>4 outlet. Again, that outlet has to be located no</p> <p>5 less than five feet from the lowest space, or they</p> <p>6 can mount it up and do a hardwire, but it has to</p> <p>7 have two means of power.</p> <p>8 MR. BAUGHMAN: So if they don't</p> <p>9 have any electricity in close proximity -- and</p> <p>10 this will go to the next one -- well, maybe we'll</p> <p>11 just address it in the next one. I'll address it</p> <p>12 in the next one.</p> <p>13 CHAIRMAN MORELOCK: Okay. Any</p> <p>14 other questions or comments about Number 6?</p> <p>15 (No verbal response.)</p> <p>16 CHAIRMAN MORELOCK: All right. All</p> <p>17 in favor say aye.</p> <p>18 (Affirmative response.)</p> <p>19 CHAIRMAN MORELOCK: Opposed?</p> <p>20 (No verbal response.)</p> <p>21 CHAIRMAN MORELOCK: Abstentions,</p> <p>22 not voting?</p> <p>23 (No verbal response.)</p> <p>24 CHAIRMAN MORELOCK: Number 6</p> <p>25 passed.</p>
<p style="text-align: right;">Page 244</p> <p>1 Moving on to Number 7, is it required</p> <p>2 for the CO detector to have two means of power</p> <p>3 source, or power.</p> <p>4 Reply is yes. One of which may be by</p> <p>5 a battery power source.</p> <p>6 MR. BOWERS: That one there, I</p> <p>7 don't know. You don't -- you want to make</p> <p>8 something simple that a lot of people can just</p> <p>9 comply with. You have some of these boiler rooms</p> <p>10 where they have to end up putting in electrical</p> <p>11 outlets and all that stuff. These battery units</p> <p>12 are used all over the place, and so we're kind of</p> <p>13 saying, well, you're not going to be able to use a</p> <p>14 battery unit.</p> <p>15 MR. TOTH: Just to be specific, I</p> <p>16 don't recall of a CO monitor that is NFPA</p> <p>17 compliant that is solely operated by battery.</p> <p>18 Battery is a back-up, including the ones at your</p> <p>19 house. You will find installations where they'll</p> <p>20 hardwire them in the ceilings and stuff of that</p> <p>21 nature. It really depends on the manufacturer</p> <p>22 recommendations. But the battery is a back-up.</p> <p>23 It's not the main source.</p> <p>24 CHAIRMAN MORELOCK: Well, but Home</p> <p>25 Depot and others will sell you a combination smoke</p>	<p style="text-align: right;">Page 245</p> <p>1 detector/CO monitor, battery powered, guaranteed</p> <p>2 for ten years.</p> <p>3 MR. BOWERS: Yes. I have them.</p> <p>4 MR. TOTH: That do not have an</p> <p>5 additional power source?</p> <p>6 CHAIRMAN MORELOCK: No. I just</p> <p>7 bought a half a dozen of them.</p> <p>8 MR. TOTH: Those would not fall</p> <p>9 under the requirements of satisfying NFPA.</p> <p>10 MR. BOWERS: By who do we have to</p> <p>11 satisfy that?</p> <p>12 MR. TOTH: I'm sorry?</p> <p>13 MR. BOWERS: We're making our own</p> <p>14 stuff here.</p> <p>15 MR. BAUGHMAN: And so our</p> <p>16 requirement, from what --</p> <p>17 MR. TOTH: If you wanted to do a</p> <p>18 battery and the battery goes dead and you're</p> <p>19 satisfied with that, put it in there.</p> <p>20 MR. BAUGHMAN: Well, and so nowhere</p> <p>21 in this are we addressing NFPA requirements being</p> <p>22 part of this that we're writing up. So we're</p> <p>23 talking about those guidelines, but we're taking</p> <p>24 that information for what it's worth. So the same</p> <p>25 thing with the limits and so forth with it. So</p>

<p style="text-align: right;">Page 246</p> <p>1 having the two sources, that could be two battery 2 sources. It just says one of those may be a 3 battery source. And if you add a battery back-up 4 to your battery, you know, it's -- all we're 5 saying -- and that gets to my above, was that we 6 said does it have to be hardwired electrically. 7 So in one we're saying we said no, it does not 8 have to be hardwired electrically. Hardwired, you 9 know, even though plugging it into a receptacle is 10 electronic, this kind of alludes to that of 11 saying, well, one needs to be electrical and 12 battery.</p> <p>13 MR. TOTH: Well, and if I may add, 14 I'm giving you my expert testimony here of the 15 research. When you talk about one of them may be, 16 I can go back and show you numerous cases where 17 code is going to say we're going to require this, 18 but one of them, such as feed water on a 19 solid-fired boiler, it uses one of them may be a 20 separate pump source. Well, that's the case, 21 because it says you'll have two sources. One of 22 them may be a pump -- yeah. So it's the same kind 23 of concept, is to say that you'll have two 24 sources. One of them may be a power source. It 25 doesn't say it can be -- or a battery source. It</p>	<p style="text-align: right;">Page 247</p> <p>1 doesn't say that it can be powered by a battery. 2 It says one may be a battery source.</p> <p>3 Now, does that mean we have two 4 separate lines, one hooked up to a generator, the 5 other -- you get where I'm going, down the road of 6 that. I'm comfortable with whatever, as long as 7 the board is comfortable recognizing when somebody 8 puts a CO monitor in their boiler room that is 9 specifically DC-powered battery source, that DC 10 power -- I don't care what Home Depot says, 11 they're going to take it back when it doesn't 12 work -- that DC power source is going to diminish.</p> <p>13 CHAIRMAN MORELOCK: Oh, yeah. I 14 agree.</p> <p>15 MR. TOTH: And I can bring you 16 return slips from many times when these light 17 fixtures at home, they said these are going to 18 last for ten years or whatever, and you took them 19 back to Home Depot and said this blew out in 20 six months. I'm fine with whatever way the board 21 wants to go with that.</p> <p>22 MR. BAUGHMAN: I would be 23 interested in, since you've got the -- both you 24 and Terry have fire backgrounds and alarms -- what 25 your thoughts are on the issue.</p>
<p style="text-align: right;">Page 248</p> <p>1 MR. O'GUIN: Me, personally, I'm 2 fine with a battery back-up, because, I mean, it 3 falls on the owner-user. If they're going to do 4 the right thing, then they're going to make sure 5 it's working anyway. And this goes the same with 6 the relief valve on the boiler. If they're going 7 to do the right thing, they're going to know if 8 it's working or it's not working.</p> <p>9 Our one inspection a year is not 10 going to save, you know, an accident if a failure 11 was to happen and the owner is not actually doing 12 safety checks, et cetera, on their equipment. 13 That's my opinion.</p> <p>14 MR. TOTH: Can I ask something, 15 Chris?</p> <p>16 MR. O'GUIN: Sure.</p> <p>17 MR. TOTH: When you said you're 18 fine with battery back-up, are you fine with 19 battery source as being the main source as well?</p> <p>20 MR. O'GUIN: I'm fine with battery 21 source.</p> <p>22 MR. TOTH: Battery source. Okay.</p> <p>23 MR. O'GUIN: They have a ten-year 24 life batteries on these alarms now. I mean, 25 that's my opinion.</p>	<p style="text-align: right;">Page 249</p> <p>1 MR. TOTH: All right.</p> <p>2 MR. BAUGHMAN: Do the alarms -- and 3 I guess I'm kind of --</p> <p>4 CHAIRMAN MORELOCK: But what you're 5 saying, it's okay as long as you're testing it 6 every six months or a year, right?</p> <p>7 MR. O'GUIN: Yeah. I mean, the 8 owner-user should take responsibility of testing.</p> <p>9 CHAIRMAN MORELOCK: Right.</p> <p>10 MR. O'GUIN: I mean, you know, I'm 11 city fire chief for Lobelville. We're part of the 12 state forestry grant -- or not the state 13 forestry -- state fire marshal's alarm grant. So 14 I install alarms in homes in my area. All these 15 alarms I install are battery only. They're not 16 hardwired. And that comes straight from the state 17 fire marshal's office.</p> <p>18 MR. BOWERS: And there's no 19 guarantee that the one that's plugged in, that the 20 receptacle is even working. It's up to you to 21 check and see if it -- so I agree with the battery 22 only.</p> <p>23 MR. TOTH: I'm fine with whatever 24 way. I'm just speaking straight from the NFPA-85.</p> <p>25 CHAIRMAN MORELOCK: Well, everybody</p>

<p style="text-align: right;">Page 250</p> <p>1 is agreeing with the way it reads. Yes, one which 2 may be a better power source, so...</p> <p>3 MR. TOTH: Okay.</p> <p>4 MR. BAUGHMAN: But what's the 5 second source?</p> <p>6 MR. BOWERS: No, he's talking about 7 second source.</p> <p>8 MR. BAUGHMAN: So it says -- is it 9 required for the detector to have two means of 10 power source. And what we're, I think, hearing 11 agreement of is that one --</p> <p>12 CHAIRMAN MORELOCK: Well, yeah. 13 Six says you have to -- well, six doesn't say you 14 have to hardwire it.</p> <p>15 MR. BAUGHMAN: That's right.</p> <p>16 CHAIRMAN MORELOCK: Seven doesn't 17 say that you can't use a battery power source.</p> <p>18 DR. HARGROVE: Well, it's saying 19 you've got to have two means.</p> <p>20 MR. BAUGHMAN: You've got to have 21 two means of power. So what we're saying is --</p> <p>22 CHAIRMAN MORELOCK: So we're not 23 telling them what to do. I mean, it's up to them 24 to figure it out.</p> <p>25 MR. BOWERS: But they're saying</p>	<p style="text-align: right;">Page 251</p> <p>1 you've got to have two means.</p> <p>2 CHAIRMAN MORELOCK: But you've got 3 to have two means.</p> <p>4 MR. BOWERS: I would say you've 5 only got one mean, the battery.</p> <p>6 CHAIRMAN MORELOCK: Oh, yeah, I 7 agree with that.</p> <p>8 MR. BOWERS: Okay.</p> <p>9 MR. BAUGHMAN: And that would be 10 changing the answer to no, is that no means one 11 power source is acceptable.</p> <p>12 MR. TOTH: Or just no.</p> <p>13 CHAIRMAN MORELOCK: Okay. Yeah.</p> <p>14 MR. TOTH: Just no. And we can 15 definitely make that change. No big deal.</p> <p>16 CHAIRMAN MORELOCK: So you're going 17 to change 7 to just have one power source?</p> <p>18 MR. BOWERS: Just battery.</p> <p>19 MR. FOX: If you --</p> <p>20 MR. TOTH: Or just say no.</p> <p>21 MR. FOX: Or you can take Question 22 7 out completely.</p> <p>23 MR. BAUGHMAN: Yeah, because --</p> <p>24 MR. TOTH: No, let's not do that. 25 Because when you do that, it's no different than a</p>
<p style="text-align: right;">Page 252</p> <p>1 box that's left unchecked.</p> <p>2 MR. FOX: I mean, you can take it 3 out completely.</p> <p>4 MR. TOTH: Did that box mean to be 5 left unchecked, or did you just forget to check 6 it?</p> <p>7 CHAIRMAN MORELOCK: I got you.</p> <p>8 MR. TOTH: So this is a case where 9 you set it out, because I promise you, it will 10 come back.</p> <p>11 CHAIRMAN MORELOCK: Okay. So 12 everybody is in agreement that Inquiry 7 will say 13 is it required for the CO detector to have two 14 means of power source? The reply is no.</p> <p>15 MR. TOTH: Okay. I'll make that 16 change.</p> <p>17 CHAIRMAN MORELOCK: All right. So 18 I'll call the question. All in favor say aye. 19 (Affirmative response.)</p> <p>20 CHAIRMAN MORELOCK: Opposed? 21 (No verbal response.)</p> <p>22 CHAIRMAN MORELOCK: Abstentions, 23 not voting? 24 (No verbal response.)</p> <p>25 CHAIRMAN MORELOCK: Okay. Moving</p>	<p style="text-align: right;">Page 253</p> <p>1 on to 8. Is it required for the detector to be 2 dedicated for CO detection only, or may the 3 detector be a multiple purpose detector/alarm?</p> <p>4 MR. TOTH: Commissioner Chairman, 5 if you'll remember during the presentation of 6 this, I kind of truncated that. So the actual 7 revised inquiry is, is it required for the 8 detector to be dedicated for CO detection only --</p> <p>9 CHAIRMAN MORELOCK: And just stop 10 right there?</p> <p>11 MR. TOTH: -- question mark.</p> <p>12 CHAIRMAN MORELOCK: Okay.</p> <p>13 MR. TOTH: And then my proposed 14 response was no. A multipurpose detector/alarm 15 may be used. A multipurpose CO detector/alarm may 16 be used.</p> <p>17 MR. BOWERS: And you're saying no 18 to that.</p> <p>19 MR. TOTH: Right. Because you have 20 some that are out there that are combination, fire 21 and CO. So I will make that change to the 22 inquiry, and then whatever the board wants for the 23 response.</p> <p>24 CHAIRMAN MORELOCK: Okay. So let 25 me reread this. So Inquiry 8 now says is it</p>

<p style="text-align: right;">Page 254</p> <p>1 required for the detector to be dedicated for CO 2 detection only, question mark.</p> <p>3           The reply to Number 8 is no. A 4 multipurpose detector/alarm may be used, period. 5 Is that correct?</p> <p>6           MR. TOTH: And if I could add a 7 little bit to that. A multipurpose CO 8 detector/alarm.</p> <p>9           CHAIRMAN MORELOCK: Okay. So just 10 add CO --</p> <p>11           MR. CHAPMAN: Slash alarm.</p> <p>12           CHAIRMAN MORELOCK: I'll put CO in 13 from of detector/alarm.</p> <p>14           MR. TOTH: Yes. And mainly to 15 ensure that that multipurpose unit does have the 16 CO monitoring in it.</p> <p>17           MR. BOWERS: So are you saying on 18 this one here -- and I'm confused between a yes 19 and a no -- that a multiple unit is allowed or not 20 allowed.</p> <p>21           MR. FOX: It is allowed.</p> <p>22           CHAIRMAN MORELOCK: It is allowed.</p> <p>23           MR. CHAPMAN: It is allowed.</p> <p>24           MR. TOTH: Uh-huh, is allowed.</p> <p>25           MR. BOWERS: Okay. The way it's</p>	<p style="text-align: right;">Page 255</p> <p>1 worded is kind of like --</p> <p>2           MR. TOTH: Well, that's why after I 3 read it out loud to you, I realized I was asking 4 two separate questions, and I should know better. 5 Right, Brian?</p> <p>6           CHAIRMAN MORELOCK: That's all 7 right.</p> <p>8           MR. TOTH: No, but you can't ask 9 two questions in an interpretation. You've got to 10 ask one, then give a response.</p> <p>11           MR. BOWERS: So people can use a 12 combination detector.</p> <p>13           MR. TOTH: Yes.</p> <p>14           CHAIRMAN MORELOCK: Yes. 15 Okay. Any more questions, comments? 16 (No verbal response.)</p> <p>17           CHAIRMAN MORELOCK: I'm going to 18 call the question on Number 8. All in favor say 19 aye.</p> <p>20           (Affirmative response.)</p> <p>21           CHAIRMAN MORELOCK: Opposed? 22 (No verbal response.)</p> <p>23           CHAIRMAN MORELOCK: Abstentions, 24 not voting? 25 (No verbal response.)</p>
<p style="text-align: right;">Page 256</p> <p>1           CHAIRMAN MORELOCK: All right. So 2 8 is passed.</p> <p>3           Number 9, is it allowed for 4 additional control and safety devices on the 5 boiler that monitor combustion gas oxygen levels 6 to ensure complete combustion; for example, oxygen 7 trim, et cetera, be accepted as the CO detector 8 for the boiler room or space where the boiler is 9 installed?</p> <p>10           And the reply is no.</p> <p>11           MR. BAUGHMAN: I say we go with 12 that.</p> <p>13           CHAIRMAN MORELOCK: You're just 14 making it clear that you can't --</p> <p>15           MR. TOTH: Making it clear that you 16 can't turn around and say, hey, I've got O2 trim 17 to verify that I'm burning completely. Because 18 you can have leaks elsewhere in the boiler --</p> <p>19           CHAIRMAN MORELOCK: Well, but 20 there's no perfect combustion.</p> <p>21           MR. TOTH: Well, there is, just not 22 in the boiler.</p> <p>23           MR. FOX: I've got a question on 24 the wording, Marty. On the second question, 25 should it say boiler, slash, water heater, since</p>	<p style="text-align: right;">Page 257</p> <p>1 we're down to 100,000 BTU input?</p> <p>2           MR. TOTH: You could, if you wanted 3 to. Again --</p> <p>4           MR. FOX: I mean, that would --</p> <p>5           MR. TOTH: If we look back at the 6 definition in the state of Tennessee of what is a 7 boiler, it encompasses high pressure, low 8 pressure, water heater -- it encompasses 9 everything. But again, it's really what the board 10 feels.</p> <p>11           MR. BAUGHMAN: Well, and it could 12 be fuel-fired equipment or -- I don't know -- or 13 we just leave it as it is and go back through.</p> <p>14           MR. FOX: Just leave it as it is.</p> <p>15           MR. CHAPMAN: Leave it as it is.</p> <p>16           MR. BAUGHMAN: Sounds good.</p> <p>17           CHAIRMAN MORELOCK: Everybody good 18 with it the way it's written? 19 (Affirmative response.)</p> <p>20           CHAIRMAN MORELOCK: Okay. I'm 21 going to call the question on Number 9. All in 22 favor say aye.</p> <p>23           (Affirmative response.)</p> <p>24           CHAIRMAN MORELOCK: Opposed? 25 (No verbal response.)</p>

<p style="text-align: right;">Page 258</p> <p>1 CHAIRMAN MORELOCK: Abstentions, 2 not voting? 3 (No verbal response.). 4 CHAIRMAN MORELOCK: Number 9 is 5 passed. 6 Inquiry 10, is there a requirement 7 for the decibel level the audible alarm must emit? 8 Reply, yes. The decibel level must 9 exceed the normal operation decibel level of the 10 boiler room or space where the boiler is located. 11 MR. BOWERS: That's kind of vague. 12 I mean, it's hard to -- 13 CHAIRMAN MORELOCK: It is. 14 Because, I mean -- 15 MR. TOTH: It's going to have to 16 be. 17 CHAIRMAN MORELOCK: I mean, you 18 know -- 19 MR. BAUGHMAN: It's -- yeah. I 20 mean, we ask this within the variance, what's your 21 decibel in the -- 22 MR. TOTH: And the reason why it's 23 vague, it's got to be. Because an example of me 24 walking through Nokian Tyre and making sure, 25 because they have multiple panels, I want to make</p>	<p style="text-align: right;">Page 259</p> <p>1 sure that the decibel level of the alarm that I 2 designed in all their panels would be over the 3 decibel level of all the equipment. Now, the 4 boiler room is the loudest of them all. But 5 again, that's a different -- pump room, yes. 6 CHAIRMAN MORELOCK: So -- 7 MR. TOTH: So you just -- you put 8 it out there and say yes, it must be. And, I 9 mean, that's really the basis. 10 CHAIRMAN MORELOCK: So what is the 11 typical decibel level in a boiler room? 12 MR. TOTH: Typical, again, you're 13 ranging between -- I would say between 82 to 95. 14 CHAIRMAN MORELOCK: Okay. 15 MR. ROBINSON: And what's the 16 typical range of a CO monitor? 17 MR. TOTH: It all depends on what 18 you buy, if it's 80 decibel or 85 or -- 19 CHAIRMAN MORELOCK: It's going to 20 exceed that. 21 MR. TOTH: But again -- 22 CHAIRMAN MORELOCK: It's going to 23 exceed that. 24 MR. TOTH: Yeah, it's going to 25 exceed that.</p>
<p style="text-align: right;">Page 260</p> <p>1 MR. BOWERS: They're probably up to 2 a hundred, aren't they, probably? 3 MR. ROBINSON: Average? 4 MR. TOTH: I don't know. 5 CHAIRMAN MORELOCK: Yeah. Because 6 you can -- you start having hearing loss above 140 7 decibels. 8 MR. TOTH: Well, yeah. And even 9 more specific, 80 is your threshold. 10 CHAIRMAN MORELOCK: Yes. 11 MR. TOTH: Okay? Anything over 80, 12 you're working into the point where you can start 13 developing, over the course of time, kind of like 14 CO -- yeah, it's going to, over the course of 15 time... 16 CHAIRMAN MORELOCK: I mean, it's a 17 good question, because if somebody is wearing 18 hearing protection to go in and check the 19 boiler -- 20 MR. BAUGHMAN: Yes, exactly. 21 CHAIRMAN MORELOCK: -- you know, I 22 mean, that's why I was asking what -- I don't want 23 you to nail it down, but it's a very interesting 24 question. 25 MR. TOTH: And, you know, again, it</p>	<p style="text-align: right;">Page 261</p> <p>1 really goes back to if you want to put a minimum 2 in there, you could, but you're -- yeah. You're 3 putting yourself in a position where -- you know, 4 one that is 84 decibel or 80 decibel, like what we 5 usually see in panels for remote monitoring, is 6 satisfactory. 7 CHAIRMAN MORELOCK: No. I'm fine 8 with the way it's worded. I just wanted to make 9 sure -- 10 MR. TOTH: 100 decibel, man, you'd 11 have people coming out of their skin. 12 CHAIRMAN MORELOCK: Yeah. 13 MR. BOWERS: It just makes it hard 14 for the inspector to go in there and say -- 15 because he don't have a reader. If you put it out 16 there and it's real loud and you say okay, this is 17 loud enough -- he's got to know if it's going to 18 be loud enough. 19 CHAIRMAN MORELOCK: Well, so if you 20 walk in there and say, "I need you to actuate that 21 CO monitor/alarm," if you can hear it, then it's 22 loud enough, right? 23 MR. TOTH: Yes. 24 MR. BOWERS: Right. 25 CHAIRMAN MORELOCK: Okay. Any</p>

<p style="text-align: right;">Page 262</p> <p>1 other questions or comments?</p> <p>2 MR. BOWERS: No.</p> <p>3 CHAIRMAN MORELOCK: All right. I'm</p> <p>4 going to call the question. All in favor say aye.</p> <p>5 (Affirmative response.)</p> <p>6 CHAIRMAN MORELOCK: Opposed?</p> <p>7 (No verbal response.)</p> <p>8 CHAIRMAN MORELOCK: Abstentions,</p> <p>9 not voting?</p> <p>10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: All right.</p> <p>12 MR. BOWERS: We got through them.</p> <p>13 CHAIRMAN MORELOCK: Got through it.</p> <p>14 MR. BAUGHMAN: So will the results</p> <p>15 from this be in our next booklet, as far as what</p> <p>16 we voted on? Because I made notes all over what</p> <p>17 was in my...</p> <p>18 CHAIRMAN MORELOCK: I'm taking mine</p> <p>19 with me.</p> <p>20 MR. BAUGHMAN: Okay.</p> <p>21 CHAIRMAN MORELOCK: I'll take mine</p> <p>22 out of the book.</p> <p>23 MR. BAUGHMAN: I'll take mine with</p> <p>24 me.</p> <p>25 MR. TOTH: Yeah. I'll send it over</p>	<p style="text-align: right;">Page 263</p> <p>1 to you once it's cleaned up.</p> <p>2 MS. BENNETT: Mark is going to redo</p> <p>3 them and then post the results.</p> <p>4 CHAIRMAN MORELOCK: Okay.</p> <p>5 MR. BAUGHMAN: Okay.</p> <p>6 MR. O'GUIN: Chairman, on these, on</p> <p>7 the CO detectors --</p> <p>8 CHAIRMAN MORELOCK: Yes?</p> <p>9 MR. O'GUIN: -- Sam and I, when</p> <p>10 that rule came out, let all the inspectors know</p> <p>11 that anything prior to July 2019 had until</p> <p>12 July 2020 to --</p> <p>13 CHAIRMAN MORELOCK: Are you going</p> <p>14 to give them a year?</p> <p>15 MR. O'GUIN: Just --</p> <p>16 MR. BAUGHMAN: What was that again,</p> <p>17 Chris? What was the time that --</p> <p>18 MR. O'GUIN: July 2020. Now, the</p> <p>19 ones -- anything that's installed after July 2019,</p> <p>20 of course, you know, do an install and get a</p> <p>21 permit. They have to have it up front.</p> <p>22 MR. BAUGHMAN: Okay. But they've</p> <p>23 got up to July '20. Okay. I'll start passing</p> <p>24 that along.</p> <p>25 MR. TOTH: Is your plan to go</p>
<p style="text-align: right;">Page 264</p> <p>1 through and update the permit, as well, to signify</p> <p>2 CO monitor?</p> <p>3 MR. CHAPMAN: Yes. We've got to</p> <p>4 sit down and work on that.</p> <p>5 MR. TOTH: Let me know where I can</p> <p>6 assist you on that.</p> <p>7 CHAIRMAN MORELOCK: Okay.</p> <p>8 MR. TOTH: I'm done.</p> <p>9 CHAIRMAN MORELOCK: Are you done?</p> <p>10 All right.</p> <p>11 MR. BAUGHMAN: There's still a</p> <p>12 discussion item.</p> <p>13 CHAIRMAN MORELOCK: If you're</p> <p>14 done -- okay. Moving on. That will take us to</p> <p>15 Item 10, Open Discussion Items. So thank you--all</p> <p>16 for -- do we have somebody to even report on JO?</p> <p>17 MR. HERROD: We're no closer than</p> <p>18 we were, to be honest with you, a few months ago,</p> <p>19 three months ago.</p> <p>20 CHAIRMAN MORELOCK: Okay. I'll</p> <p>21 just say progress report on that.</p> <p>22 MR. HERROD: We may be closer now</p> <p>23 than we were earlier today.</p> <p>24 CHAIRMAN MORELOCK: Okay.</p> <p>25 MR. BAUGHMAN: That's progress.</p>	<p style="text-align: right;">Page 265</p> <p>1 CHAIRMAN MORELOCK: Okay. So the</p> <p>2 next item is discussion regarding variance manual</p> <p>3 submission and dates and procedures. And, of</p> <p>4 course, Marty said he's done, but he does have an</p> <p>5 interp that -- should we just, maybe, review it</p> <p>6 and go over it in March?</p> <p>7 MR. CHAPMAN: Yes.</p> <p>8 CHAIRMAN MORELOCK: Are you okay</p> <p>9 with that?</p> <p>10 (Affirmative response.)</p> <p>11 CHAIRMAN MORELOCK: We'll just have</p> <p>12 him submit his item for March.</p> <p>13 MR. BAUGHMAN: Sounds like a plan.</p> <p>14 CHAIRMAN MORELOCK: Tentative</p> <p>15 meeting dates for 2020 is March the 18th, June the</p> <p>16 10th, September the 16th and December the 9th. So</p> <p>17 does anybody have a conflict for March the 18th?</p> <p>18 MS. BENNETT: The March 18th</p> <p>19 meeting, it's actually a week later than what we</p> <p>20 normally meet.</p> <p>21 CHAIRMAN MORELOCK: Okay.</p> <p>22 MS. BENNETT: But there was not a</p> <p>23 conference room in the entire building, so...</p> <p>24 CHAIRMAN MORELOCK: Even the Pearl</p> <p>25 Room?</p>

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1 MS. BENNETT: None of the rooms.  
 2 So that's why --  
 3 CHAIRMAN MORELOCK: If we're going  
 4 to have this big meeting in March, we may need  
 5 to --  
 6 MS. BENNETT: No, no, no. The  
 7 18th --  
 8 CHAIRMAN MORELOCK: Oh, you're  
 9 good.  
 10 MS. BENNETT: -- there were rooms  
 11 available. But the week prior, there was nothing  
 12 available.  
 13 CHAIRMAN MORELOCK: I got you. I  
 14 got you.  
 15 MS. BENNETT: Yeah.  
 16 CHAIRMAN MORELOCK: So we can get  
 17 the Pearl Room on the 18th?  
 18 MS. BENNETT: I can check.  
 19 MR. BAILEY: We're hoping.  
 20 MS. BENNETT: Yeah. I'll have to  
 21 check afterwards.  
 22 CHAIRMAN MORELOCK: Okay. But we  
 23 definitely have this room available, right, for  
 24 March 18th?  
 25 MS. BENNETT: Yes.

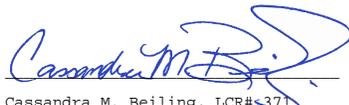
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1 CHAIRMAN MORELOCK: Right.  
 2 MS. BENNETT: And he's got to be at  
 3 both, so I'll work with you guys.  
 4 CHAIRMAN MORELOCK: We should be  
 5 okay.  
 6 MS. BENNETT: Okay.  
 7 CHAIRMAN MORELOCK: Okay. That  
 8 takes us to Item 11. And so our next meeting will  
 9 be March 18th here in Nashville. We'll determine  
 10 if it's going to be in the Pearl Room. But that's  
 11 it.  
 12 Before I adjourn, I want to thank  
 13 you-all for hanging in. It's been a long day. We  
 14 got a lot done. And that's what we've been asked  
 15 to do, so we wanted to make sure we gave you your  
 16 money's worth today, so...  
 17 Thank you-all very much. Merry  
 18 Christmas. Happy New Year. We'll see you in  
 19 March.  
 20 We're adjourned.  
 21  
 22 END OF THE PROCEEDINGS.  
 23  
 24  
 25

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1 CHAIRMAN MORELOCK: So no conflicts  
 2 for March 18th? We can have a quorum?  
 3 MR. BAILEY: With Tom's clout --  
 4 CHAIRMAN MORELOCK: What?  
 5 MR. BAILEY: With Tom's clout,  
 6 we'll be able to get that Pearl Room.  
 7 CHAIRMAN MORELOCK: All right.  
 8 I've got faith in him.  
 9 Okay. So here is what I want to do.  
 10 We know we're good for the 18th of March to have a  
 11 quorum, and we've got a full agenda. Look at your  
 12 calendars for the 19th of June, the 16th of  
 13 September, and December the 9th.  
 14 MR. BAUGHMAN: The 19th of June or  
 15 June 10th?  
 16 CHAIRMAN MORELOCK: Yes, June 10th,  
 17 September 16th, December the 9th. And if we need  
 18 to adjust, we'll adjust them. You can send me an  
 19 email if we need to adjust the June, September,  
 20 and December, and we'll work with Carlene to get  
 21 that straightened out.  
 22 MS. BENNETT: Well, just so you  
 23 know, I have to coordinate with the Elevator &  
 24 Amusement Device Safety Board, because, of course,  
 25 Tom -- we can't have them back to back.

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1 C E R T I F I C A T E  
 2 STATE OF TENNESSEE )  
 3 COUNTY OF WILLIAMSON )  
 4 I, Cassandra M. Beiling, a Notary Public  
 5 in the State of Tennessee, do hereby certify:  
 6  
 7 That the within is a true and accurate  
 8 transcript of the proceedings taken before the  
 9 Board and the Chief Inspector or the Chief  
 10 Inspector's Designee, Tennessee Department of  
 11 Labor & Workforce Development, Division of  
 12 Workplace Regulations and Compliance, Boiler Unit,  
 13 on the 11th day of December, 2019.  
 14  
 15 I further certify that I am not related to  
 16 any of the parties to this action, by blood or  
 17 marriage, and that I am in no way interested in  
 18 the outcome of this matter.  
 19  
 20 IN WITNESS WHEREOF, I have hereunto set my  
 21 hand this 24th day of January, 2020.  
 22  
 23   
 24   
 25 Cassandra M. Beiling, LCR# 371  
 Notary Public State at Large  
 My commission expires: 3/15/2020

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